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ABSTRACT

The compendium is an annotated bibliography of materials containing instructional objectives and of objectives-based materials collected from institutions, school systems, state departments of education, and commercial producers of educational materials. Organization of listings is by topic, grade range, and alphabetical order. A listing of macro-collections, compilations which contain objectives in a number of different areas and many objectives per area, is followed by a listing of micro-collections, which contain objectives in at least three different areas. Other sections list materials containing educational objectives for specific curriculum areas: early childhood, creative arts, language, mathematics, reading, science, social studies, and vocational-technical education. Final sections list sources (bibliographies and reports) containing objectives or references concerning objectives, materials dealing with development and use of objectives, and teacher training materials which consist of or contain instructional objectives. Information given for each entry includes title, grade range, publisher, price, brief description of material, and a list of topics covered in the material. (KW)

ED 062743

INSTRUCTIONAL OBJECTIVES:
A NATIONAL COMPENDIUM



DIVISION OF ELEMENTARY & SECONDARY EDUCATION
DEPARTMENT OF EDUCATION • TALLAHASSEE / FLORIDA • FLOYD T. CHRISTIAN COMMISSIONER

INSTRUCTIONAL OBJECTIVES:
A NATIONAL COMPENDIUM

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STATE OF FLORIDA
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FOREWORD

The utilization of instructional objectives is rapidly becoming as common an educational practice as taking attendance. The accountability movement has amplified the need for precise statements of expected student behaviors and the development of techniques for assessing the presence or absence of these behaviors. In response to these needs, educators at all levels are increasingly basing their instruction on pre-specified instructional objectives. Commercial producers have responded to the resulting educational market demands by developing objectives-based instructional materials. The combined efforts of education and industry have yielded a plethora of carefully stated objectives in a wide variety of instructional areas.

A major thrust in Florida is increased accountability for educational programs. The new state strategy includes the clarifying of goals and objectives, and the analysis and evaluation of educational programs. Florida's Educational Research and Development Program is currently funding projects to develop assessment instruments in a number of curriculum areas. The products from these projects will be used in state assessment, independent program assessment, and classroom instruction. The Board of Governors for the Educational Research and Development Program has recommended, however, that pupil assessment instruments be developed only when other suitable instruments and techniques cannot be obtained more economically.

Primarily in response to Florida's need, but also in recognition that similar situations exist in other states, the Florida Board of Regents, under the auspices of the Florida Educational Research and Development Program, conducted a nationwide survey. Primarily through the use of questionnaires and letters, sent to a wide variety of persons and institutions, information was collected on a myriad of instructional objectives and objectives-based materials.

This document presents the findings of the survey as of May, 1972. It is anticipated that the summary will serve as a reference source for educators contemplating development or implementation of objectives-based education. It is also hoped that other developers, who were not identified for contact, will be prompted to contribute information on their endeavors so that a more comprehensive document may be compiled at a later date.

The authors wish to express sincere appreciation to the Florida Department of Education personnel who provided considerable assistance in the development of this document, especially Mr. John Healy - Coordinator for Assessment, Educational Research and Development Program, Mr. Philip Doughty - Acting Coordinator for Independent Program Assessment, and Dr. Fred W. Vorce - Music Consultant. Appreciation is also due Thelma Varner for her invaluable assistance in the production of the Compendium. Especial gratitude is extended to all contributors who took the time and energy to share their efforts.

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INTRODUCTION

The critical step in conducting this survey was the identification of sources of instructional objectives. Within the state of Florida the task was somewhat simplified in that key sources were readily identifiable; the task was somewhat more difficult outside the State. It was determined that the most logical initial contacts would be with the state directors of curriculum, instruction, and evaluation. It was correctly assumed that they would supply information on at least the most outstanding efforts in their states. The next major step was the identification of public school systems, universities, regional educational research and development laboratories, and national organizations either known to be involved in the development of instructional objectives, known to be engaged in related activities, or potentially involved in such endeavors because of their size or progressive philosophy. Lastly, an intensive effort was made to identify and contact all major commercial producers of educational materials.

The response to our request for information and materials was gratifyingly high. The response rates for the categories of institutions contacted ranged from 62% to 94%; nearly every state department of education sent information on state efforts. Several comprehensive collections of objectives were identified and obtained, as well as a large number of subject-matter-specific compilations. In addition, documents were received which either dealt with the utilization of objectives or described sources of information on objectives. Lastly, teacher education materials were obtained, most of which contained objectives embedded in a modular format.

The Compendium is organized by topic, grade range and alphabetical order. Collections have been divided into MACRO-COLLECTIONS and MICRO-COLLECTIONS. MACRO-COLLECTIONS contains descriptions of compilations (arranged alphabetically) which contain objectives in a number of different areas and which contain many objectives per area. MICRO-COLLECTIONS contains descriptions of collections which contain objectives in at least three different areas. These are arranged alphabetically within intended grade range. Descriptions of objectives in the curriculum areas, e.g. MATHEMATICS, are also arranged alphabetically within grade range, with the exception of VOCATIONAL-TECHNICAL EDUCATION; descriptions in this category are ordered alphabetically by vocational area. SOURCES OF SOURCES contains descriptions of bibliographies and reports which contain either objectives or references concerning objectives; these are arranged alphabetically by title. UTILIZATION OF OBJECTIVES contains descriptions of materials which deal with the development and utilization of instructional objectives; these are also arranged alphabetically by title. Finally, the TEACHER EDUCATION section contains annotations of available teacher training materials which consist of, or contain, instructional objectives. These are arranged alphabetically, by topic, and by title within topic. SOURCES OF SOURCES, UTILIZATION OF OBJECTIVES, and TEACHER EDUCATION were not originally intended to be sections in the Compendium. However the number

of unsolicited entries received warranted their inclusion. Consequently, in contrast to other sections of the Compendium, these three sections are in no way to be considered comprehensive.

Descriptions of materials are presented in the words of the developer whenever possible. Annotations include the title of the materials, the intended grade range (K = kindergarten, P = primary, I = intermediate, JH = junior high, SH = senior high, A = adult, or, post-secondary), name and location of the publisher, and the price of the materials when known. Since it would be impossible to relate all important aspects of each reported effort, this summary presents a brief description of the materials and a listing of the topics included. Using this approach, interested persons may examine the annotations in the area or areas of their choice and identify sources of objectives relevant to their needs.

To enhance the usability of this document, the name and address of the contact person for each entry in the Compendium are presented on the page opposite the page on which the entry originates. Although many more persons were contacted, they either did not respond, did not have materials to contribute, had materials which are not yet available, or responded after the Compendium had been compiled. Late arrivals will be integrated into a revised version at a later date.

Additional copies of this document are available upon request.

INSTRUCTIONAL OBJECTIVES:
A NATIONAL COMPENDIUM

SOURCE REFERENCE

1. Edina Public Schools
4660 West 77th Street
Edina, Minnesota 55435

MACRO-COLLECTIONS

1. Curriculum Objectives and Materials (K-SH) - Edina Public Schools, Edina, Minnesota

Description: A series of documents (guides, units, topic outlines, course outlines, scope and sequence, objectives, learning packets, and teaching packets) developed in a wide variety of curriculum areas. Books of objectives also include sample items, test items, answer keys, and resources keyed to specific objectives. Learning packets contain terminal objectives and specific objectives.

| Topics Included: | <u>Elementary</u> |
|---|-------------------|
| Art (I) | \$ 5.00 |
| *Kindergarten Performance Objectives (K) | 5.50 |
| Literature | 3.00 |
| *Mathematics Performance Objectives (K-I) | 35.00 |
| Music (I) | 4.00 |
| Physical Education (P) | 4.00 |
| Physical Education (Scope & Sequence) | 2.00 |
| *Reading Performance Objectives (P) | 15.00 |
| *Reading Performance Objectives (I) | 21.00 |
| Science Units (I) | |
| Forces which Govern Universal Bodies | 3.00 |
| Chemistry | 2.00 |

| <u>Secondary</u> | |
|---|-------|
| <u>Language Arts</u> | |
| Composition-Outline (JH) | 3.00 |
| Composition at the Typewriter (JH) | 3.00 |
| Creative Dramatics (JH) | 3.00 |
| Creative Writing (JH) | 1.00 |
| *Exploring in Multi-Dimension (Learning Packet) | 1.00 |
| Expository Writing (JH) | 1.00 |
| History of Language (JH) | 3.00 |
| Humor - Teaching Packet (JH) | 3.00 |
| Introduction to Language-Unit (JH) | 3.00 |
| Introduction to Poetry-Unit (JH) | 3.00 |
| Literature-Outline (JH) | 1.00 |
| Man Future-Unit (JH) | 2.00 |
| Modern Grammar-Unit (JH) | 1.00 |
| *Nouns-Learning Packet | 3.00 |
| Language Arts Semester Outline (SH) | 10.00 |
| Humanities (SH) | 1.00 |

*Definitely includes objectives (materials not so marked may or may not contain specific objectives).

Foreign Languages

| | |
|------------------------|------|
| French I & II. | 6.00 |
| German I & II. | 6.00 |
| Latin III. | 3.00 |

Social Studies

| | |
|---|------|
| *April Morning - Learning Packet (JH) | 3.00 |
| *The Light in the Forest - Teaching Packet (JH) | 3.00 |
| Conflict in Culture (JH) | 3.00 |
| The Colonial Period (JH) | 3.00 |
| The Constitution (JH) | 3.00 |
| The American Revolution (JH) | 3.00 |
| Minorities (JH) | 3.00 |
| American Government (JH) | 3.00 |
| Industrialization: Movement Toward a Mass Society (SH) | 1.00 |
| Political-Diplomatic History | 1.00 |
| United States Diplomacy: From Isolation to Involvement (SH) | 1.00 |
| United States History Unit: Protest & Reform in America (SH) | 1.00 |
| World History Unit: Latin America (SH) | 1.00 |
| World History Unit: Sub Sahara with Supplement (SH) | 2.00 |
| *Asian Studies (SH) | 3.00 |

Mathematics

| | |
|---|-------|
| Consumer Mathematics (SH) | 1.00 |
| Computer Programming (SH) | 5.00 |
| Introductory Algebra I & II (JH-SH) | 4.00 |
| *Mathematics Performance Objectives & Learning Activity Units (SH) | 15.00 |
| Modern Geometry (SH) | 3.00 |
| Refresher Mathematics | 1.00 |

Home Economics

| | |
|---|------|
| Clothing Construction Sequence (JH) | 1.00 |
| Foods & Nutrition (JH) | 1.00 |
| Foods & Nutrition (SH) | 1.00 |
| General Clothing & Related Units (SH) | 2.00 |
| Intermediate Clothing (SH) | 1.50 |

Science

| | |
|------------------------------------|------|
| Junior High Science (JH) | 4.00 |
| Physics Manual (SH) | 3.00 |

Reading

| | |
|--|------|
| Developmental Reading (JH) | 3.00 |
| *Elements of Verbal Development - Objectives- Based Units (JH-SH) | 3.00 |

SOURCE REFERENCE

2. Institute for Educational Research
1400 West Maple Avenue
Downers Grove, Illinois 60515

| | |
|---|------|
| <u>Other</u> | |
| Bay's Physical Education | 4.00 |
| Introductory Unit for Multi-Disciplinary | |
| Team Teaching (JH) | 1.00 |
| Modern Art | 1.00 |
| Music Appreciation (JH) | 1.00 |
| Business Systems | 1.00 |
| Environment Study-Ecology-Based Science | |
| Outline | 2.00 |
| Man's Future (Science Fiction) - Language | |
| Arts (JH) | 2.00 |
| Critical Thinking - A Teaching Packet - | |
| Language Arts (JH) | 3.00 |

2. Evaluation for Individualized Instruction (K-SH) - Institute for Educational Research, Downers Grove, Illinois (\$110.00/complete set)

Description: An objective-item bank covering sixteen sectors of four subject areas in each of four grade ranges. Nearly 5,000 behavioral objectives and over 27,000 test items are included. The bank contains cognitive and affective objectives and items for Language Arts, Mathematics, Social Studies and Science. The package also includes an "Operational Guide for Teacher Workshops" (on behavioral objectives and item writing) and "A Report on the Evaluation Workshop in the Affective Domain" both of which are objectives-based.

| Topics Included: | LANGUAGE ARTS |
|--------------------------|-----------------------|
| | <u>Primary</u> |
| Grammar & Usage | Intermediate |
| Phonics | Communications |
| Mechanics | Critical Thinking |
| Alphabet | Etiquette |
| Reference Sources | Grammar & Usage |
| Vocabulary | Literature |
| Reading Skills | Word Study |
| Critical Thinking | |
| Creative Writing Through | |
| Literature | |
| | <u>Junior High</u> |
| Communications | Senior High |
| Critical Thinking | Literary Periods |
| Etiquette | Literary Techniques & |
| Grammar | Devices |
| History of Language | Literary Works & |
| How to Study Literature | Authors |
| Mechanics | Critical Thinking |
| Use of References | Rhetoric |
| Word Study | Reference |
| | Grammar |
| | Mechanics |
| | Letters |

MATHEMATICS

Primary

| | |
|---|--|
| Numbers & Numeration | Multiplication & Division of Whole Numbers |
| Counting | Multiplication |
| Place Holders & Value | Multiplication & Division |
| Order | Measurement |
| Comparison | Length |
| Fewest, Most | Size |
| Pairs | Liquid |
| Roman | Time |
| Properties | Bills & Coins |
| Fractions | Geometry |
| Mathematical Symbols | Shapes |
| Addition & Subtraction of Whole Numbers | Symmetry |
| Addition | Patterns |
| Subtraction | Sets |
| Addition & Subtraction | Empty |
| | One |
| | Equal-Equivalent |

Intermediate

| | |
|--|-------------------------------------|
| Numbers & Numeration | Addition & Subtraction |
| Names | Whole Number Addition |
| Place Holders & Value | Whole Number Subtraction |
| Expanded Notation | Whole Number Addition & Subtraction |
| Rounding | Simplification of Fractions |
| Number Line | Addition of Fractions |
| Inequalities | Addition & Subtraction of Fractions |
| Exponential Notation | Addition & Subtraction of Decimals |
| Fractions | Sets |
| Decimals | Introduction |
| Bases | Cardinal Number |
| Roman Numerals | Empty |
| Primes & Factors | Equal Equivalent |
| Multiplication & Division | Subsets & Supersets |
| Whole Number Multiplication | Operations |
| Whole Number Division | Venn Diagrams |
| Whole Number Multiplication & Division | Logarithms & Exponentials |
| Multiplication & Division of Fractions | Graphing |
| Percent | Functions |
| Arithmetic Applications | Inference |
| Applications of Whole Numbers | Measurement |
| Applications of Fractions | Length, Area & Volume |
| Number Systems | Maps |
| Finite-Infinite Properties | Bills & Coins |
| Rational-Irrational | Statistics |

Junior High

| | |
|-----------------------------------|--|
| Definitions & Rules | Functions & Relations |
| Sets | Measurement |
| Numbers | Polygons |
| Arithmetic Operations | Polynomials |
| Modular Arithmetic & Bases | Exponents |
| Fractions, Decimals & Proportions | Graphs & Charts |
| Word Problems | Sequences |
| Simplification & Substitution | Angles & Trigonometry |
| Equations | Probability, Combinations & Permutations |
| Inequalities | Spatial Perceptions |

Senior High

| | |
|---------------------------------|--|
| Angles | Polygons |
| Computers & Data Processing | Polynomials |
| Conics | Primes & Factors |
| Construction | Probability, Combinations & Permutations |
| Definitions | Radicals |
| Distance Formulas | Proofs, Logic, Theorems & Axioms |
| Equations | Sequences, Progression & Series |
| Exponents | Sets |
| Fractions, Decimals & Exponents | Simplification |
| Functions & Relations | Slope-Intercept |
| Graphing | Trigonometry |
| Inequalities | Vectors |
| Measurement | Word Problems |
| Numbers | |
| Points, Lines & Planes | |

SOCIAL STUDIES

Primary

| | |
|--------------------------------|-----------------------|
| Social Studies Terminology | Map Reading |
| Principles of Geography | Living in Communities |
| Transportation & Communication | Safety Rules |

Intermediate

| | |
|-------------------------|-----------------------|
| General Social Sciences | History |
| Procedures & Processes | Early Man |
| Terminology | Ancient Civilizations |
| Map Reading | Middle Ages |
| Critical Thinking | American History |
| Geography | |
| General Principles | |
| Countries | |

Secondary School

Introduction
 Locating the Central Issue
 Distinguishing Fact from Opinion
 Determining Difficulty of Proof
 Distinguishing Between Biased & Non-Biased Sources
 Detecting Bias
 Evaluating Sources of Information
 Evaluating the Potential Validity of Sources
 Recognizing Emotional Words
 Drawing Inferences
 Evaluating the Certainty of Statements
 Determining Relevancy
 Recognizing Stated & Unstated Assumptions
 Distinguishing Between Selected Terms
 Interpreting & Applying the Provisions of a Document
 Selecting Probable Outcomes
 Identifying Factors Leading to Significant Historical Events
 Identifying Selected People, Places, Regions, or Events
 Comparing & Contrasting Our Culture with Others

SCIENCE

Primary

| | |
|----------------------------|------------------------|
| Digestive System | Circulatory System |
| Skin & Senses System | Brain & Nervous System |
| Respiration System | Skeletal System |
| Characteristics of Animals | Plants |
| Earth Science | Mechanics & Heat |

Intermediate

| | |
|---------------------------------|------------------------|
| Characteristics of Body Systems | Nature of Matter |
| Digestive System | Color |
| Respiratory System | Earth Science |
| Circulatory System | Weather |
| Nervous System | Machines |
| Skeletal System | Electricity |
| Reproduction | Planets & Space Travel |
| Health | Mechanics & Heat |
| Characteristics of Animals | Light |
| Insects | Critical Thinking |
| Characteristics of Plants | Measurement |

Junior High

| | |
|--------------------|-----------------------|
| Respiratory System | Circulatory System |
| Excretory System | Digestive System |
| Animal Cells | Nervous System |
| Skeletal System | Geology |
| Oceanography | Laws of Motion |
| Space Travel | Weather |
| Matter | Properties of 4 Gases |
| Energy | Tools & Techniques |
| Measurement | Drugs |
| Critical Thinking | |

SOURCE REFERENCE

3. Dr. W. James Popham
Instructional Objectives Exchange
The Center for the Study of Evaluation
Box 24095
Los Angeles, California 90024

Senior High

Physical Sciences

| | |
|--------------------------------|--------------------------|
| Measurement | Models & Problem Solving |
| Charts & Graphs | Mechanics |
| Energy | Atomic Structure |
| Heat | Waves |
| Light | Electricity & Magnetism |
| Gases | Moles |
| Structures, Formulas & Bonding | Solutions & Solubility |
| Equations & Equilibrium | Acids & Bases |
| Reactions & Rates | Oxidation-Reduction |
| Electrochemical Cell | Electrolysis |

Life Sciences

| | |
|----------------------------|---------------------|
| Capillarity | Diffusion & Osmosis |
| Electron Transport System | Enzymes |
| Genetics | Microscope |
| Organic Compounds | Photosynthesis |
| Plant Function & Structure | Plasmolysis |
| Reproduction | Problem Solving |
| | Drugs |

3. Instructional Objective Exchange - IOX (K-12) - University of California, Los Angeles, California (\$8.00/topic)

Description: A comprehensive compilation of objectives and criterion-references test items. Many of the topic areas include multiple items per objective. Also available is a user's guide which discusses the selection of objectives, instruction and evaluation.

| | | |
|------------------|--|---|
| Topics Included: | <u>Language Arts: Decoding Skills (K-SH)</u> Discrimination Recognition of Letters by Name Pronunciation of Letter Combinations & Words Sight Vocabulary Recognition, Reproduction of Sounds and Their Association with Letters | <u>Language Arts: Comprehension Skills (K-SH)</u> Literal Comprehension Interpretation Vocabulary & Word Meaning Comprehension of Non-Written Materials |
| | <u>Language Arts: Structural Analysis (K-SH)</u> Individual Word Forms Multiple Word Forms Division of the Form History of the Form | <u>Language Arts: Composition Skills (K-SH)</u> Basic Composition Story Writing Letters Figurative & Descriptive Language Poetry Writing Paragraph Form & Development Expository Paragraph Form Paragraph Development |

Language Arts: Listening, Oral Expression, & Journalism (K-SH)

Listening
 Affective Listening
 Comprehension & Interpretation
 Analytical Listening
 Oral Expression
 Speech
 Oral Presentation
 Journalism
 Journalistic Techniques
 Journalistic Forms

Language Arts: Mechanics & Usage (K-SH)

Mechanics
 Capitalization
 Punctuation
 Integrated Practice
 Usage
 Sentence Sense
 Sentence Precision

English Skills (SH)

Speech
 Mass Media
 Composition

Mathematics (P)

Sets
 Numbers, Numerals,
 Numeration Systems
 Operations & Their Properties
 Measurement
 Geometry
 Relations, Functions & Graphs
 Probability & Statistics
 Application--Problem Solving
 Mathematical Sentences--Order, Logic

Language Arts: Study & Reference Skills (K-SH)
 Reference Skills -
 Use of Data Sources
 Study Skills

Language Arts: Traditional Grammar (K-SH)

Parts of Speech
 Sentence Analysis

Language Arts: Transformational Grammar (K-SH)
 Sentence Components
 Transformations

English Literature (JH)

The Novel
 Poetry

English Skills (JH)

Composition
 Mechanics & Conventions
 Diction & Tone
 Speech
 Mass Media
 Reference Skills
 Study Skills

English Grammar (JH-SH)

Parts of Speech
 Syntax
 Morphology
 Phonology

Mathematics (I)

Sets
 Numbers, Numerals,
 Numeration Systems
 Operations & Their Properties
 Measurement
 Geometry
 Relations, Functions & Graphs
 Probability & Statistics
 Application--Problem Solving
 Mathematical Sentences--Order, Logic

Mathematics (JH)

Sets
 Numbers, Numerals,
 Numeration Systems
 Operations & Their
 Properties
 Measurement
 Geometry
 Relations, Functions
 & Graphs
 Probability & Statistics
 Application--Problem
 Solving
 Mathematical Sentences--
 Order, Logic

Business Law (SH)

Foundations of Law
 Law of Contracts
 Law of Property
 Law of Negotiable
 Instruments
 Law of Business Relations
 & Business Organizations

General Business (SH)

Vocabulary
 Money & Banking Services
 Checking Accounts
 Cost of Living & Taxes
 Kinds of Business Ownership
 Sales
 Marketing Functions
 Insurance & Pensions
 Consumer Services
 Communications
 Employment Application
 & Interview
 Business Math
 Glossary

Home Economics (SH)

Child Development
 Clothing & Textiles
 Consumer Practices
 Design Principles
 Health Services
 Home Management &
 Family Economics
 Housing
 Pregnancy

General Math (SH)

Sets
 Numbers, Numerals,
 Numeration Systems
 Operations & Their
 Properties
 Measurement
 Percents
 Geometry
 Probability
 Logic
 Applications, Problem
 Solving

Business Education-
Bookkeeping (SH)

Ten Bookkeeping Processes
 Banking Transactions
 Cash Transactions
 Payroll Records
 Depreciation
 Accrual & Deferred
 Expense
 Vocabulary Skills

Business Education -Secretarial Skills (SH)

Typing
 Shorthand
 Office Machines
 Office Practice
 Business English &
 Communication

Home Economics (JH)

Child Development
 Clothing & Textiles
 Consumer Practices
 Foods & Nutrition
 Home Management &
 Family Economics

Health (Nutrition) (P-I)

Daily Food Choices
 Nutrients from Food
 Food Processing
 Consumer Education
 Food in Man's Environment

Auto Mechanics (SH)

Automotive Tune-up &
Repair

General Metals (JH-SH)

Property of Metals
Operations & Functions
Cutting & Shearing
Filing
Cutting Holes
Grinding
Forming & Bending Metals
Metal Spinning
Threaded Fasteners
Soldering
Riveting
Sheet Metal Seams
Polishing & Buffing
Decorating Metal

Mechanical Drawing (JH-SH)

Basic Drafting Skills
Beginning Lettering
Making the Drawings
Orthographic Projections
Dimensioning
Scale Drawing
Pictorial Drawing
Section Drawing
Auxiliary Views
Productions Notations
Thread Conventions &
Symbols
Assembly & Detail
Drawings
Reference Symbols

Music (P-I)

Melody
Harmony
Melody & Harmony
Rhythm
Musical Form
Musical Sound
Performance
Band Instruments
Wind Instruments
String Instruments

Spanish (JH-SH)Electronics (JH-SH)

Fundamentals
Block Diagrams
Direct-Current Circuits
Primary & Secondary
Batteries
Magnetism
Electromagnetic Induction
Direct-Current Generators
Direct-Current Motors
& Controls
Alternating Current
Single-Phase Circuits
Operations & Maintenance
Glossary

Woodworking (JH-SH)

Tools
Reading a Working Drawing
Stock Billing
Distances & Lines
Clamping Stock
Crosscutting & Ripping
Stock
Getting Out Rough Stock
Irregular Surfaces
Planning Stock
Chamfering
Laying-Out Patterns
Boring Holes
Sawing Curves
Making Joints
Fastening Joints
Sanding
Bleaching
Finishing
Hanging Doors
Mounting Locks
Correcting Defects
Gluing Upstock
Removing Finishes

Physical Education (P)

Locomotor Skills
Sensory Motor Skills
Balance
Total Body Skills
Eye-Hand Skills
Eye-Foot Skills

SOURCE REFERENCE

4. Mr. Larry Conaway
Assistant to the Director
1860 Lincoln, Suite 300
Denver, Colorado 80203

American History (JH-SH)

- Historical Figures
- Historical Inferences
- Analysis of Data
- Historical Speeches
- Historical Documents
- British Colonial Acts
- Values & Goals
- Political Philosophies
- Military Conflict
- Political Influence
- Society & Culture
- Supreme Court Cases
- Constitutional Rights
- Legislation
- Territorial Expansion
- Geography
- United Nations
- Testing Hypotheses
- Political Protest

Attitudes Related to Tolerance (SH)

- List of Objectives
- Paper & Pencil Instruments (Direct Self-Report)
 - General
 - Ethnic
- Paper & Pencil Instruments (Inferential)
 - General
 - Ethnic

Sociology (I-JH)

- The Method of Sociology
- Social Organization
- Social Processes & Social Change

Measures of Self Concept (K-SH)

- Objectives by Grade Ranges
- Self-Concept Measures
 - Direct Self Report
 - Inferential Self Report
 - Observational Indicators

Attitude Toward School (K-SH)

- Objectives by Grade Ranges
- Attitude Toward School Measures
 - Direct Measures
 - Inferential Measures
 - Observational Indicators

Judgment: Deductive Logic & Assumption Recognition (JH-SH)

- List of Objectives
- Measures

Anthropology (I)

- Man as a Unique Animal
- Fossil Man & Prehistory
- The Record of Culture
- The Nature of Culture
- Genetics, Evolution & Race

Early Childhood Education

- Achieving in the Arts
- Language Arts
- Math & Arithmetic Skills
- Promoting Physical Growth
- Science
- Satisfying Social & Personal Needs

4. National Assessment of Educational Progress (P-SH) - National Assessment Project, Denver Colorado (\$1.00/curriculum area)

Description:

Booklets of objectives in a variety of curriculum areas. For each area objectives are listed which are appropriate to ages 9, 13, 17 and young adults. Also available are demonstration packages which indicate items used for assessment at each of the age levels in each of the assessed areas. The objectives and the assessment instruments cover a wide range of difficulty levels.

Topics Included:

| <u>Mathematics</u> | |
|------------------------------|------------------------------------|
| Number & Numeration Concepts | Properties of Numbers & Operations |
| Arithmetic Computation | Sets |
| Estimation & Measurement | Exponents & Logarithms |
| Algebraic Expressions | Equations & Inequalities |
| Functions | Probability & Statistics |
| Geometry | Trigonometry |
| Mathematical Proof | Logic |
| Business & Consumer Math | Attitude & Interest |
| Miscellaneous | |

| <u>Social Studies</u> | |
|---|--|
| Have Curiosity about Human Affairs | |
| Use Analytic-Scientific Procedures Effectively | |
| Are Sensitive to Creative-Intuitive Methods of Explaining the Human Condition | |
| Have Knowledge Relevant to the Major Ideas & Concerns of Social Scientists | |
| Have a Reasoned Commitment to the Values that Sustain a Free Society | |

| <u>Science</u> | |
|---|--|
| Know Fundamental Facts & Principles of Science | |
| Possess the Abilities & Skills Needed to Engage in the Processes of Science | |
| Understand the Investigative Nature of Science | |
| Have Attitudes about & Appreciations of Scientists, Science, & the Consequences of Science that Stem from Adequate Understandings | |

| <u>Reading</u> | |
|---|--|
| Comprehend What is Read | |
| Analyze What is Read | |
| Use What is Read | |
| Reason Logically from What is Read | |
| Make Judgments Concerning What is Read | |
| Have Attitudes about & an Interest in Reading | |

| <u>Writing</u> | |
|---|--|
| Write to Communicate Adequately in a Social Situation | |
| Write to Communicate Adequately in a Business or Vocational Situation | |
| Write to Communicate Adequately in a Scholastic Situation | |
| Appreciate the Value of Writing | |

| <u>Literature</u> | |
|---|--|
| Read Literature of Excellence | |
| Become Engaged In, Find Meanings In, and Evaluate A Work of Literature | |
| Develop a Continuing Interest & Participation in Literature and the Literary Experience | |

Art

Perceive & Respond to Aspects of Art
 Value Art as an Important Realm of Human Experience
 Produce Works of Art
 Know About Art
 Make & Justify Judgements about the Aesthetic Merit & Quality of Works of Art

Music

Perform a Piece of Music
 Read Standard Musical Notation
 Listen to Music with Understanding
 Be Knowledgable about some Musical Instruments, Some of the Terminology of Music, Methods of Performance & Forms, Some of the Standard Literature of Music, & Some Aspects of the History of Music
 Know about the Musical Resources of the Community & Seek Musical Experiences by Performing Music
 Make Judgments aout Music, & Value the Personal Worth of Music

Career & Occupational Development

Prepare for Making Career Decisions
 Improve Career & Occupational Capabilities
 Possess Skills that are Generally Useful in the World of Work
 Practice Effective Work Habits
 Have Positive Attitudes Toward Work

Citizenship

Show Concern for the Welfare & Dignity of Others
 Support Rights & Freedoms of All Individuals
 Help Maintain Law & Order
 Know the Main Structure & Functions of Our Government
 Seek Community Improvement through Active Democratic Participation
 Understand Problems of International Relations
 Support Rationality in Communication, Thought & Action on Social Problems
 Take Responsibility for Own Personal Development & Obligations
 Help & Respect Their Own Families
 Nurture the Development of Their Children as Future Citizens

Other topics will be available.

SOURCE REFERENCE

5. Mrs. Wanda Perry
PLAN
Westinghouse Learning Corporation
2680 Hanover Street
Palo Alto, California 94304

5. PLAN: Master Objectives (K-SH) - Westinghouse Learning Corporation, Palo Alto, California

Description: A program of individualized education in Reading, Language Arts, Mathematics, Science, and Social Studies which can be adapted to each pupil's needs, abilities, interests and goals. The major components of the program are a set of instructional objectives, a variety of study plans to achieve these objectives, and a computer support system to help plan student learning and monitor student progress. Objectives for the Guidance program are also included.

Topics Included:

| <u>Primary Objectives</u> | |
|---|--------------------------------|
| Language Arts | Mathematics |
| Orientation to PLAN | Numerals |
| Readiness | Place Value to 9999 |
| Language Arts Skills | Roman Numerals |
| Reading Skills | Addition of 4-digit Numbers |
| Writing | Subtraction of 4-digit Numbers |
| Social Studies | Multiplication Facts |
| History | Division with 1-digit Numbers |
| Sociology | Addition of Like Fractions |
| Geography | Patterns of Objects |
| Economics | Functions of a Graph |
| Science | Geometric Figures |
| Biology | Value of Coins |
| Psychology | Time to the Minute |
| Physics | Linear Measure to 1/4 Inch |
| Chemistry | Temperature Readings |
| Geology | Elements of a Set |
| Meteorology | Set Notation |
| Inquiry Development - Observing/Perceiving | Number Sentences |
| Inquiry Development - Taxonomic/Classifying | Word Problems |
| Inquiry Development - Experimenting | |

Intermediate Objectives

| | |
|---|-------------------------------|
| Language Arts | |
| History & Dialectology | Listening |
| Speaking | Reading-Study Skills |
| Reading-Phonetic Analysis & Structural Analysis | Reading-Organizational Skills |
| Reading-Critical Reading Skills | Reading-Interpretation Skills |
| Reading-Literature & Literary Form | Writing-Form & Analysis |
| Writing-Correspondence Skills | Writing-Creative Writing |
| | Writing-Structure |
| | Writing-Mechanics |
| | Writing-Study Skills |
| | Non-Verbal Communication |

| | |
|---|---|
| Science | Mathematics |
| Life Science | Analysis of Number & System |
| Psychology | Operations: Numerical & Algebraic |
| Physical Sciences | Operations: Graphics |
| Earth & Space Science | Geometry |
| Inquiry Process Development - Observing/Perceiving | Measure & Probability |
| Inquiry Process Development - Taxonomic/Classifying | Sets & Logic |
| Inquiry Process Development - Experimenting | Problem Solving |
| Humanizing | |
| | Social Studies |
| | History |
| | Sociology/Anthropology |
| | Psychology/Philosophy |
| | Political Science |
| | Geography |
| | Economics |
| | Social Studies Research |
| <u>Secondary Objectives</u> | |
| Language Arts | Science |
| History & Dialectology | Life Sciences |
| Listening | Life Science-Ecology |
| Speaking | Life Science-Psychology |
| Reading-Critical Reading Skills | Physical Science-Physics |
| Writing-Form & Analysis | Physical Science-Chemistry |
| Writing-Creative Writing | Earth Science-Geology |
| Writing-Structure & Mechanics | Earth Science-Meteorology |
| Writing-Study Skills | Earth Science-Astronomy |
| Mathematics | Inquiry Process Development-Observing/Perceiving |
| Analysis of Number & System | Inquiry Process Development-Questioning/Problem Formulation |
| Operations: Numerical & Algebraic | Inquiry Process Development-Taxonomic/Classifying |
| Calculus | Inquiry Process Development-Formulating Hypotheses |
| Operations: Graphics | Biology-Inquiry Development |
| Geometry | Inquiry Process Development-Experimenting |
| Measure & Probability | Inquiry Process Development-Inferring/Applying |
| Social Studies | |
| History | |
| Sociology/Anthropology | |
| Psychology/Philosophy | |
| Political Science | |
| Geography | |
| Economics | |
| Social Studies Research | |

SOURCE REFERENCE

6. Dr. Dale Wiezenecker
Assistant Superintendent for Instruction
Behavioral Objectives Project Report
Brevard County Schools
P. O. Box 5
Titusville, Florida

7. Mr. George A. Koopman, Vice-President
Edcodyne Corporation
One City Boulevard West, Suite 935
Orange, California 92668

MICRO-COLLECTIONS

6. Brevard County Behavioral Objectives Project (K-I) - Brevard County Schools, Titusville, Florida

Description: A collection of objectives for all areas of the elementary school curriculum. Also included are pre-school objectives classified by subject matter area.

Topics Included: Reading, Language Arts, Mathematics, Health, & Safety. Objectives for these categories are arranged by grade level.

| | |
|---------------------------------------|------------------------------|
| <u>Science</u> | <u>Social Studies</u> |
| Observing | Man & Society |
| Classifying | Geographical Environment |
| Space-Time Relations | Culture Structure & Behavior |
| Measuring | Self-Government |
| Predicting | Economic Needs & Wants |
| Formulating Hypotheses | Societal Behavior |
| Controlling Variables | Skills |
| Defining Operationally | Values & Attitudes |
| Interpreting Data | |
| | |
| <u>Kindergarten & Nursey</u> | <u>Music</u> |
| Language Arts | Creativity |
| Mathematical Relationships | Verbalization |
| Health, Physical Development & Safety | Music Reading |
| Art-Crafts | Discrimination & Skill |
| Music | Comprehension |
| Science | Value Judgements |
| Social Studies | Perception |
| | Conceptualization |
| | Attitudes |
| | Application |
| | |
| <u>Art</u> | <u>Physical Education</u> |
| Visual Relationships | Physical Fitness |
| Production | Rhythm & Movement Skills |
| Criticism | Team Activities & Sports |

7. Assessment Program of Early Learning Levels - APELL (K-P) - Edcodyne Corporation, Orange, California (\$320.00/first year/class - \$35.00 each additional year/class).

Description: The APELL is an instructional management system for use at the preschool, kindergarten, and first grade levels. It diagnoses skill levels based on specific measurable objectives and suggests instructional activities and materials for the child's individual needs.

SOURCE REFERENCE

8. Mr. Joe Carico
Educational Progress Corporation
2250 Monaghan Drive
Tallahassee, Florida 32303

9. Dr. Robert O'Reilly, Chief
Bureau of School and Cultural Research
State Education Department
Albany, New York 12224

| | | |
|------------------|---|--|
| Topics Included: | <u>Pre-Reading</u> Visual Discrimination Similarities Differences Auditory Association Beginning Sounds Word Beginnings Letter Names | <u>Language</u> Nouns Pronouns Verbs Adjectives Plurals Prepositions |
| | <u>Pre-Math</u> Discrimination of Attributes Position, Size Quantity, Shape Number Concepts Counting Number Identification Set Relationships | Number Facts Addition Subtraction |

8. Multimedia Programs (K-JH) - Educational Progress Corporation, Tulsa, Oklahoma

| | |
|-----------------|---|
| *Description: | A collection of multimedia programs which contain objectives embedded within the materials. |
| Program Titles: | |
| | Human Growth & Development (c \$130.00 to \$360.00) |
| | Continuous Progress Laboratory (c \$100.00) |
| | Audio Reading Progress Laboratory (c \$80.00 to \$340.00) |

9. System for Pupil and Program Evaluation and Development (SPPED) (K-SH) - New York State Education Department, Albany, New York

| | |
|---------------|--|
| *Description: | SPPED is a comprehensive computer-based system for monitoring student progress and for aiding in program development. The technical support system contains the following: BOIR - Bank of Instructional Objectives, Items and Instructional Resources CAM - Comprehensive Achievement Monitoring MAST-T - Mastery Testing Test scheduling and test construction programs Training for teachers Paper Bank - Objectives and items for several areas. SPPED was developed to aid teachers in designing instructional programs, in adjusting and refining instruction on a continuous basis, in monitoring student progress, and in managing student progress on a day to day basis. |
|---------------|--|

*This annotation is based on a description of the materials; the actual materials were not forwarded for inspection.

SOURCE REFERENCE

10. Mrs. Margaret DuMars, Principal
Rosewood Elementary School
Vero Beach, Florida

11. Dr. Glenn Fletcher
Houston Independent School District
Houston, Texas 77002

It also aids the administrator in evaluating, monitoring and managing instructional programs. Students benefit from detailed feedback on their learning.

The objectives contained in the program are from three sources: IOX, Downers Grove and the state of New York. (The IOX and Downers Grove objectives are described previously - see MACRO-COLLECTIONS.)

10. Behavioral Objectives Syllabus (P-I) - Rosewood Elementary School, Vero Beach, Florida

| | | | |
|------------------|--|--|---|
| Description: | A collection of cognitive and affective objectives for administrators, teachers, support personnel and students. | | |
| Topics Included: | Administration Guidance Media Center Textbooks Food Service Transportation | School Plant & Facilities Art Health Health & Safety Transportation | Mathematics Music Physical Education Safety Science Social Studies |

11. Objectives for Elementary Subject Areas (P-I) - Houston Independent School District, Houston, Texas

| | | | |
|------------------|---|---|--|
| Description: | An outline of terminal objectives in a number of areas which indicates performances expected of students upon the completion of the third grade and upon completion of the sixth grade. | | |
| Topics Included: | <u>Handwriting</u> <u>Language</u> Appreciation: Observing & Listening Oral Language Written Composition Form & Mechanics Syntax | <u>Mathematics</u> Mathematics 1 Strands Concept Skills Operations, Sentences, Properties Competency Strands Computation | |
| | Reading Word Analysis & Study Skills Comprehension & Study Skills | <u>Social Studies</u> Acquisition of Knowledge Development of Skills Development & Establishment of Values | |
| | <u>Science</u> <u>Inquiry</u> Scientific Attitudes Scientific Thinking Concepts | <u>Spelling</u> <u>Study Habits</u> Affective and Interpersonal Goals | |

SOURCE REFERENCE

12. Mr. Norman E. Harris
Field Manager
Southeastern Region
Silver Burdett Company
3272 Peachtree Road, N. E.
Atlanta, Georgia 30305
13. Mr. John Patrick
Room 506 Knott Building
State Department of Education
Tallahassee, Florida 32304
14. Evaluation Center
Hopkins Schools
1001 Highway 7
Hopkins, Minnesota 55343
15. Mr. O. D. Roberts, Director
Program Planning
Leon County Public Schools
925 Miccosukee Road
Tallahassee, Florida 32303

12. Objectives for Spelling, Social Studies and Mathematics (P-JH) - Silver Burdett Company, Atlanta, Georgia (\$2.00 each)

Description: Includes three booklets: Performance Objectives for "Spell Correctly"; Performance Objectives for "Contemporary Social Science Curriculum"; and A Nongraded Program for "Modern Mathematics through Discovery". Objectives are organized by levels. The resources upon which the spelling and mathematics objectives are based contain procedures for evaluation.

13. Elementary and Secondary Accreditation Standards (P-SH) - Department of Education, Tallahassee, Florida

Description: Guides for writing performance objectives in the visual arts, mathematics, and English language arts. Each guide includes goal statements and objectives for instruction, materials and equipment, and facilities.

14. Evaluation Center Collection (P-SH) - Hopkins Evaluation Center, Hopkins, Minnesota

*Description: Materials written and collected by teachers for use in their own classrooms. They are reviewed annually by the teachers who utilize item analysis data in order to improve the collection.

| | | |
|------------------|----------|------------------|
| Topics Included: | Algebra | American History |
| | Biology | Mathematics |
| | English | Social Studies |
| | Geometry | World Studies |

15. Objectives Based on State Accreditation Standards (P-SH) - Leon County School System, Tallahassee, Florida

Description: A collection of process and product objectives based on Florida's Accreditation Standards. Includes objectives for students, instructional personnel, and the school.

SOURCE REFERENCE

16. Dr. Raymond Bernabei
Intermediate Unit #22
Administration Building - 7th Floor
Bucks County Public Schools
Doylestown, Pennsylvania 18901

17. Mr. David W. Lloyd
Thurston Intermediate School
700 Park Avenue
Laguna Beach, California 92615

| | | |
|------------------|---|---|
| Topics Included: | <u>Vocational-Technical</u> <u>Industrial Arts (SH)</u> <u>Technical Education (SH)</u> <u>Distributive Education (SH)</u> <u>Home Economics (JH)</u> | <u>Exceptional Children</u> <u>Educable Mentally Retarded</u> <u>Visually Handicapped</u> <u>Learning Disabilities</u> <u>Speech Correction</u> |
| | <u>School Health & Safety</u> <u>Service (P-I)</u> <u>Art (P-SH)</u> <u>Physical Education (P-I)</u> <u>Guidance Services (P-SH)</u> | <u>Pre-School</u> <u>Music (P-I)</u> <u>Foreign Language (SH)</u> <u>Media (P-SH)</u> |

16. Quality Education Program Study (P-SH) - Bucks County Public Schools, Doylestown, Pennsylvania (\$12.00)

Description: A series of booklets which describe objectives and evaluation for ten major goals of quality education. Each goal has two reports. The first is a Description which contains behavioral statements of effective and ineffective student behaviors related to the goal, a rationale for the areas of effective student behavior, and related teacher strategies. The second is related to the Needs Assessment of that goal and contains instructions, the general needs assessment instrument, and an analysis of instruments.

Topics Included: GOAL ONE - Self Understanding
GOAL TWO - Understanding Others
GOAL THREE - Basic Skills
GOAL FOUR - Interest in School & Learning
GOAL FIVE - Good Citizenship
GOAL SIX - Good Health Habits
GOAL SEVEN - Creativity
GOAL EIGHT - Vocational Development
GOAL NINE - Understanding Human Accomplishment
GOAL TEN - Preparation for a Changing World

17. Objectives for the Intermediate School (JH) - Thurston Intermediate School, Laguna Beach, California (\$2.00/topic area)

Description: Continua of objectives for academic, non-academic and vocational areas. Also available are job descriptions for personnel described in performance terms.

| | | |
|------------------|---|---|
| Topics Included: | <u>Science</u> Tools of Science Chemical Laws of Nature Magnetism and Electricity Structure of Life Movement Receptors Digestion Circulation Reproduction Ecology Personal Health | <u>Social Studies Continuum</u> Social Studies Skills Anthropology Civilization The Age of Democratic Revolution Politics and the United States Constitution The Constitution and Individual Rights Geography |
| | <u>Mathematics</u> Sets Numbers & Numerals Mathematical Operations Number Sentences Number Theory Measurement Geometry Statistics & Probability Logic Functions | <u>Music Appreciation</u> Instrumentation Baroque & Classical Periods (1700-1820) Romantic Period & Twentieth Century (1820-present) Wind Instruments Percussion Instruments Stringed Instruments Choral Music |
| | <u>English</u> Basic Study Skills Language Study Written Communication Literature Reading Skills | <u>Typing</u> Shop Woodworking Metal Working Industrial Drawing |
| | <u>Physical Education</u> Aerobics Balance Basketball Creative Dance Soccer Speedway Stunts & Tumbling Swimming Tennis Track & Field Folk Dance Volleyball Wrestling Football Health | <u>Arts</u> Art Crafts |
| | | <u>Foreign Language - Spanish & French</u> Pronunciation Vocabulary Grammar Culture Oral Communication Reading Writing |

SOURCE REFERENCE

18. Mr. Samuel Sharrow
Dunbar Community High School
500 N. Caroline Street
Baltimore, Maryland 21205

18. Instructional/Curriculum Materials - Learning Activity Packages (JH-SH) -
 Dunbar Community High School, Baltimore, Maryland (\$1.00/Learning Activity Package)

| | | | |
|------------------|---|---|---|
| Description: | A collection of instructional modules each containing objectives, a pretest, activities and resources for each objective, and evaluation procedures. | | |
| Topics Included: | <u>Social Studies</u> Let Freedom Ring American Medicine & Health A Lap on Maps Melting Pot Immigration | <u>Mathematics</u> Natural Numbers (5 LAPS) Decimals (5 LAPS) Fractions (8 LAPS) Percents (5 LAPS) Metric System (3 LAPS) Programma 101 (5 LAPS) Coordinate Geometry (5 LAPS) Sets (5 LAPS) | <u>Mathematics</u> Natural Numbers (5 LAPS) Decimals (5 LAPS) Fractions (8 LAPS) Percents (5 LAPS) Metric System (3 LAPS) Programma 101 (5 LAPS) Coordinate Geometry (5 LAPS) Sets (5 LAPS) |
| | <u>Data Processing</u> Card Punch Machine Operations (5 LAPS) | | |
| | <u>Science</u> Basic Laboratory Techniques & Safety Precautions Measuring Devices: Measurement of volume, weight, & temperature Solutions & How to Prepare Them The Microscope Cells, the Basic Units of Life DNA: The Molecule of Life Life from Life: Reproduction & Development Acquiring & Transporting Materials Techniques in Culturing Micro-organisms Microbiology: Part I Introduction Microbiology: Part II Bacteriology Microbes Other than Bacteria | <u>English</u> Kernel Structure Eliminates Wordiness Who, What, & What's Happening Adjectives & Adverbs Coloring Your Ideas Add a Little Spice Focusing on Phrases & Clauses Let's Make it a Howling Success Come to the Point Kernel Structure Avoid Wordiness Wrapping it All Up Following Directions on Tests & Assessment of Skills From Sentences to a Paragraph Non-Verbal Communication A LAP on LAP's | <u>Science</u> Basic Laboratory Techniques & Safety Precautions Measuring Devices: Measurement of volume, weight, & temperature Solutions & How to Prepare Them The Microscope Cells, the Basic Units of Life DNA: The Molecule of Life Life from Life: Reproduction & Development Acquiring & Transporting Materials Techniques in Culturing Micro-organisms Microbiology: Part I Introduction Microbiology: Part II Bacteriology Microbes Other than Bacteria |

SOURCE REFERENCE

19. Dr. Donald T. Tosti
Vice-President
Individual Learning Systems, Inc.
P. O. Box 3388
San Rafael, California 94902

19. Individualized College Level Courses: Criterion-Referenced Tests (A) -
Individual Learning Systems, Inc., San Rafael, California

Description: For each topic, a test set includes alternate forms of criterion-referenced unit tests, criterion-referenced course post-tests, and answer keys.

Topics Included: Behavior Technology: Motivation and Contingency Management

Introductory Sociology

Precalculus: Algebraic & Trigonometric Functions
An Individualized History of the United States
(Volumes I and II)

Other courses are currently available.

SOURCE REFERENCE

20. Dr. Raymond Bernabei
Intermediate Unit #22
Administration Building - 7th Floor
Bucks County Public Schools
Doylestown, Pennsylvania 18901
21. Dr. Donald Wood, Coordinator
Curriculum and Supervision
State Department of Education
140 Cordell Hull Building
Nashville, Tennessee 37219
22. Ms. Anita Brewer, Director
Information and Communications
Southwest Educational Development Laboratory
800 Brazos Street
Austin, Texas 78701

EARLY CHILDHOOD

20. Behavioral Objectives Curriculum Guide: A Transitional Pre-First Grade Program (K) - Bucks County Public Schools, Doylestown, Pennsylvania (\$3.50)

Description: An individualized program of sequential, developmental learning experiences leading to readiness for first grade. Designed for children who have completed kindergarten who have indicated a need for an extended readiness period. Includes an outline of objectives and suggested pupil learning experiences for each objective.

| | | |
|------------------|---|---|
| Topics Included: | <u>Visual Motor Triordination</u> Body in Space Perception Eye-Hand Coordination | <u>Visual Perception</u> Visual Memory Visual Discrimination |
| | <u>Auditory Perception</u> Auditory Discrimination Auditory Motor Sequential Auditory Memory | <u>Language Use</u> Speech Oral Language Facility & Comprehension Reading Comprehension |

21. A Curriculum Guide for Kindergarten Children (K) - Lake County, Nashville, Tennessee

Description: A curriculum guide which contains objectives and instructional activities for eight basic learning skills areas. Also contains suggested equipment and materials, suggested instruments for evaluation, and a basic book list.

| | | |
|------------------|--|--|
| Topics Included: | Visual Perception & Auditory Perception Motivation Classroom Skills Language Development | Mathematics Socialization Esthetic Development Physical Development |
|------------------|--|--|

22. Early Childhood System for Economically Disadvantaged and Culturally Different Children (Pre K-K) - Southwest Educational Development Laboratory, Austin, Texas

*Description: The system emphasizes teaching of sensory - perceptual, cognitive and language skills.

SOURCE REFERENCE

23. Dr. Charles L. Bertram
Appalachia Educational Laboratory, Inc.
P. O. Box 1348
Charleston, West Virginia 25325

The system is offered in four variations:

A three-year sequential bilingual program for children ages three to five

A two-year sequential bilingual program for children ages four and five

Bilingual Kindergarten

Kindergarten English Speakers

Each variation employs four basic components - instructional material, staff development, parent education, and learning ecology. Lesson plans contain objectives, materials, precautions and special instructions.

23. The Initial Phase of a Preschool Curriculum Development Project (Pre - P) -
West Virginia University, Morgantown, West Virginia

Description: Objectives for a compensatory preschool program for Appalachian children. Objectives are divided into major categories of motor activities, language skills, and cognition, and deal with the three methods of intervention - home visitation, mobile facilities, and television programming.

Topics Included: Orienting and Attending Skills
(e.g. persistence)

Motor Activity
(gross, fine, creative)

Language
Language Construction
(phonology & sentence production)
Descriptive Language
(describing objects & events & dramatic expression)

Cognition
Sensory Discrimination
(auditory, perceptual, tactile)
Higher Order Cognitive Acts
(e.g. memory, seriation, problem solving)

SOURCE REFERENCE

24. Miss Frankie MacDonald
Supervisor, Art Education
2418 Hatton Street
Sarasota, Florida 33577

25. Mr. Edmund W. Schaefer
Music Contact Person
Bay County School Board
1855 Liddon Road
Panama City, Florida 32401

THE CREATIVE ARTS

Art

24. Behavioral Objectives Based on State Accreditation Standards (P-SH) - Sarasota Public School System, Sarasota, Florida

Description: A listing of objectives for art, P-SH, based on the Proposed Accreditation Standards for Florida Schools, 1969-70, designed to provide a basis for a total art program.

| Topics Included: | <u>Elementary</u> |
|------------------------------------|-------------------|
| Cognitive Approach | Unity |
| Pre-Cognitive Approach | Shape |
| Invisible Symbols & Ideas | Emphasis |
| Sculpture | Volume |
| Collages & Mosaics | Contrast |
| Fabrics & Textiles | Line |
| Architecture & Home Furnishings | Repetition |
| Ceramics, Pottery & Jewelry | Color |
| Printing & Graphics | Transition |
| Severing, Joining & Forming | Texture |
| New Media or Hardware | Tension |
| Value, Intensity, Texture | Space |
| Objects, Style, Composition | Drawing |
| Lines, Figures, Interpretation | Painting |
| Justification of Negative Response | Displaying |
| Focus-Closure | Colors |
| Symbols | Attributes |
| Response | Meanings |
| Changes | Quality |
| | Feelings |

| <u>Secondary</u> |
|---------------------------|
| Arrangements & Principles |
| Forming & Constructing |
| Potentials & Limitations |
| Qualitative |

Characteristics
Arrangement
Reaction
Comparative
Value

Music

25. Bay County Music Guide (K-1) - Bay County Public Schools, Panama City, Florida

Description: A comprehensive music guide for elementary grades including goals, student objectives, suggested related activities, materials, equipment, textbooks and recordings. Also includes a basic song list, filmstrip titles, resource units and sources of materials and supplies.

SOURCE REFERENCE

26. Mr. Phil E. Suiter
Director of Teacher Preparation
State Department of Education
Charleston, West Virginia 25305
27. Mrs. Dorothy Land
Elementary Music Supervisor
Palm Beach County Schools
Box 2469
West Palm Beach, Florida 33402
28. Mr. T. James Edison
Supervisor, Elementary Music
707 E. Columbus Drive
Tampa, Florida 33602

| | | |
|------------------|--|---|
| Topics Included: | Rhythm Melody Harmony Form Singing | Listening Playing Reading Creativity |
|------------------|--|---|

26. West Virginia Music Program (K-A) - West Virginia State Department of Education, Charleston, West Virginia

| | |
|--------------|---|
| Description: | A series of booklets and handbooks describing the music program for the State of West Virginia from K through A. Includes expected measurable outcomes for students and statements of teacher objectives for the music program. Program reflects a spiral approach. |
|--------------|---|

| | | |
|------------------|--|--|
| Topics Included: | Band Vocal Music Listening Musical Experience Relationships Between Music & Other Arts | Music Reading Music History Self-expression Music Structure |
|------------------|--|--|

27. Assessment of the Behavioral Curriculum in Music (P-I): Appendix E, Objectives of the Elementary Music Curriculum - Palm Beach County Schools, West Palm Beach, Florida

| | |
|--------------|---|
| Description: | A behavioral curriculum in elementary music with objectives sequenced according to logical development, student growth and development and convenience and tradition. |
|--------------|---|

| | | |
|------------------|--|-------------------|
| Topics Included: | Melody Form Expressive Qualities | Rhythm Harmony |
|------------------|--|-------------------|

28. Behavioral Objectives for Music (P-I) - Hillsborough County Public Schools, Tampa, Florida

| | |
|--------------|--|
| Description: | A collection of cognitive and affective music goals and objectives for elementary school students. |
|--------------|--|

SOURCE REFERENCE

29. Mr. O. D. Roberts
Instructional Services
925 Miccosukee Road
Tallahassee, Florida 32303
30. Mr. William E. George
Assistant Superintendent for Instruction
Indian River County School Board
P. O. Box 2648
Vero Beach, Florida 32960
31. Dr. D. C. Anderson, Director
Division of Elementary and Secondary Education
Kentucky Department of Education
Frankfort, Kentucky 40601

| | | |
|------------------|--|--|
| Topics Included: | Creativity Singing Verbalization Music Reading Discrimination & Skill Comprehension | Value Judgements Perception Conceptualization Attitude Application |
|------------------|--|--|

29. Elementary School Music Curriculum Guide (P-I) - Leon County School System, Tallahassee, Florida

Description: An elementary music curriculum guide composed of goals and objectives for singing, moving, listening, playing, creating and reading for grades 1-5. Also included are scope and sequence objectives for music reading and recommended music textbooks.

30. Indian River County Music Guide, 1970 (P-I) - Indian River County, Vero Beach, Florida

Description: An elementary music curriculum guide composed of skill, literature and concept objectives for grades 1-6.

Topics Included: Melody
Harmony

Rhythm
Form Expression
& Style

31. Music Education (P-SH) - Kentucky Department of Education, Frankfort, Kentucky

Description: Definitions of basic concepts and practices essential to the development of a music program. Outlines desirable goals for the various areas and grade levels.

Topics Included: Foundations of Music Education
Musical Values and Education
Program Planning and Development
Special Areas
Experiences Contributing to the Music Program

SOURCE REFERENCE

32. Mr. Lloyd Schmidt
Music Consultant
Connecticut State Department of Education
Bureau of Elementary and Secondary Education
Hartford, Connecticut

33. Mr. Robert Lampi
Florida Bandmasters Association
Box 666
Pahokee, Florida 33476

32. A Taxonomy for Behavioral Objectives in Music (P-SH) - Connecticut State Department of Education, Hartford, Connecticut

Description: A general taxonomy for objectives in music which includes goals, classification of behavior, classification of sub-topics for general musicianship, activities, parameters and conditions. Instrumentation of the taxonomy is outlined for cognitive behavior, affective behavior, psychomotor behavior, and creativity. A glossary of terms is provided.

33. Florida Bandmasters Association State Accreditation Committee Report: Instructional Objectives (JH-SH) - Florida Bandmasters Association, Pahokee, Florida

Description: Cognitive and affective objectives for students participating in band, based upon state of Florida Accreditation Standards.

| Topics Included: | Expression | Evaluation |
|------------------|---------------------------|----------------|
| | Listening | Sensitivity |
| | Verbalization | Creation |
| | Performance | Respect |
| | Skill Development | Attention |
| | Perception | Valuing |
| | Post-School Participation | Interest |
| | Recognition | Implementation |
| | Analysis | Growth |

SOURCE REFERENCE

34. Dr. L. C. Leach
Specialist in English Language Arts
State Department of Education
State Education Building
Little Rock, Arkansas 72142

LANGUAGE

English

34. Behavioral Objectives, Language and Literature (K-SII) - Arkansas State Department of Education, Little Rock, Arkansas

Description: A series of objectives in the cognitive and affective domains for courses in language and literature in grades K-12.

| Topics Included: | <u>Objectives in Language</u> |
|------------------------|-------------------------------|
| The Nature of Language | Phonology |
| History of Language | Sentence Patterns |
| Old English Period | Form Classes |
| Middle English | Syntax |
| Early Modern English | Noun Phrase |
| Modern English | Verb Phrase |
| Dialect | Single-Base Transformations |
| Semantics | Double-Base Transformations |
| Morphology | |

| | <u>Objectives in Literature</u> |
|-----------------------------------|----------------------------------|
| Children's Literature | Short Story |
| Literary Structure & Form | The Nature of the Short Story |
| Folk Tales | Setting |
| Adventure Stories | Point of View |
| Fanciful Tales | Character Development |
| Animal Stories | Plot Structure |
| Myths | Style & Tone |
| Fables | Theme |
| Stories of Other Lands | Novel |
| & People | The Nature of the Novel |
| Biography | Setting |
| Historical Fiction | Point of View |
| Poetry | Character Development |
| Essays | Plot Structure |
| Poetry | Style & Tone |
| The Nature of Poetry | Theme |
| Tone & Diction | Drama |
| Sound, Rhythm, & Meter | The Nature of Drama |
| Figurative Language | Tragedy |
| The Poet & His Poetry | Comedy |
| Characterization in Poetry | Setting |
| Theme in Poetry | Plot |
| Values in Poetry | Point of View |
| Analysis & Evaluation of Poetry | Character Development |
| Appreciation for Poetry | Style |
| Critical Approaches to Literature | Appreciation for Drama |
| Traditional Approaches | Psychological Approach |
| Formalistic Approach | Mythical & Archetypal Approaches |
| Exponentional Approaches | |

SOURCE REFERENCE

35. Malcolm Price Laboratory School
State College of Iowa
Cedar Falls, Iowa
36. Mr. George M. Gibbs, Coordinator
Division of Curriculum Services
Fairfax County Public Schools
10700 Page Avenue
Fairfax, Virginia 22030
37. Mr. Jack Allen
Director of Curriculum
Multnomah County Intermediate Education
District
P. O. Box 16657
Portland, Oregon 97216

35. The English Language Arts Program (K-SH) - Malcolm Price Laboratory School, Cedar Falls, Iowa (\$1.00)

Description: A guide for instruction which provides an overview of the concepts to be dealt with in the area of language arts. Desirable outcomes are listed at four levels for each of seven topic areas reflecting a spiral approach. Also included is a bibliography.

| | | |
|------------------|-----------|--------------------|
| Topics Included: | Listening | Language |
| | Reading | Spelling |
| | Speaking | Use of the Library |
| | Writing | |

36. Reporting to Parents: English Language Arts (K-JH) - Fairfax County Public Schools, Fairfax, Virginia

Description: A booklet listing objectives in English Language Arts to be completed by each student at each grade level. A space is provided for indicating the date on which the student attained the objective. The form is used as a reporting vehicle to the parents.

Topics Included:

- Recognize and Use Words Effectively
- Comprehend and Interpret Written Material
- Use Accepted Mechanics of Writing
- Use Basic Study Skills
- Write for Informational Purposes
- Write for Creative Expression
- Use Oral and Dramatic Expression Effectively
- Analyze and Evaluate Multimedia Communication
- Establish Personal Tastes and Values

37. Tri-County Area Course Goal Collection in Language Arts (K-SH) - Multnomah County Intermediate Education District, Portland, Oregon

Description: A collection of goal statements arranged in a hierarchical manner to reflect the need for greater specificity as one progresses from the district level, through the program level, down to the course level. A fourth level of goal statements is the teacher made goal statement. Goals at this level, however, are not specified by the district.

SOURCE REFERENCE

38. Mr. George T. Gabriel, Director
Office of Educational Research
Board of Education of Baltimore County
Towson, Maryland 21204
39. Mr. Tom Gann
Jefferson County Schools
1810 25 Court 800th
Homewood, Alabama 35209
40. Mr. Normand Robitaille
Project Director
Mascenic Bilingual Program, ESEA, Title VII
Sacred Heart School
Greenville, New Hampshire 03048

38. English Language Diagnostic Test: First Level (P) - Board of Education of Baltimore County, Towson, Maryland

Description: A test designed to measure acquisition of specific language concepts and skills included in grades 1-3 of the GUIDE TO THE STUDY OF THE ENGLISH LANGUAGE, K-6, a publication of the Board of Education of Baltimore County. Parallel forms are available.

| | | |
|------------------|--------------------|--------------|
| Topics Included: | Word Order | Nouns |
| | Punctuation | Verbs |
| | Syntax | Pronouns |
| | Kinds of Sentences | Coordination |

39. Language Arts Units (P-JH) - Jefferson County Schools, Birmingham, Alabama

Description: A series of units, for grade three or grade seven, designed to give every child a degree of success with his English program. Each third grade unit contains an overview, resources, a teacher plan, behavioral objectives, bulletin board suggestions, a student lesson directional sheet, a student individual work sheet or exercise sheet, a post-test, and an answer key. Each seventh grade unit contains an overview, behavioral objectives, a teacher's unit, evaluation, and students' units. In all units, objectives are classified according to Bloom's Taxonomy.

| Topics Included: | Grade 3 | Grade 7 |
|------------------|-------------------------|---------------------|
| | Playacting Stories | Nouns |
| | Building Good Sentences | Pronouns |
| | Friendly Letters | Verbs |
| | Learning About Verbs | Adjectives |
| | Writing Paragraphs | Adverbs |
| | Nouns | Connectives |
| | Telling Stories | Punctuation |
| | Helpful Units in Speech | Understanding Words |
| | Improving Sentences | Letter Writing |
| | Finding Facts | Library |

French

40. Behavioral Objectives for French (K-P) - Sacred Heart School, Greenville, New Hampshire

Description: A listing of French objectives for kindergarten, first grade, and second grade. In addition, for each objective suggested materials and processes are included.

SOURCE REFERENCE

41. Mr. J. W. Knight
Center for Individualized Instructional
Systems
P. O. Box 11343
Durham, North Carolina 27703
42. Dr. Dale Wiezenecker
Assistant Superintendent for Instruction
Brevard Mathematics Continuum
Brevard County Schools
P. O. Box 5
Titusville, Florida
43. Mr. D. L. Bundren
Clark County School District
2832 East Flamingo Road
Las Vegas, Nevada 89109

MATHEMATICS

41. Behavioral Objectives for the Individualized Mathematics System, Levels I-IX
 (K-I) - Regional Education Laboratory for the Carolinas and Virginia,
 Durham, North Carolina

Description: Presentation of ten topics in elementary mathematics at each of nine levels. For any given topic and level, the number of objectives ranges from one to eleven.

| | | |
|------------------|--------------------------|------------------|
| Topics Included: | Numeration | Fractions |
| | Addition | Mixed Operations |
| | Subtraction | Money |
| | Multiplication | Time |
| | Division | Measurement |
| | Geometry-to be completed | |

42. Mathematics Continuum (K-I) - Brevard County Schools, Titusville, Florida

Description: A sequence of elementary mathematics objectives listed in order of difficulty within a topic. Includes resources, and criterion-referenced tests.

| | | |
|------------------|---------------------------|------------------------|
| Topics Included: | <u>Mainstream Topics</u> | <u>Floating Topics</u> |
| | Numeration | Geometry |
| | Sets | Metric |
| | Number Theory | Non-metric |
| | Number Sentences | Time |
| | Place Value | Money |
| | Addition & Subtraction | Special Topics |
| | Multiplication & Division | |
| | Fractions | |
| | Decimals | |
| | Integers | |

43. Mathematics Curriculum Guide (K-I) - Clark County School District, Las Vegas, Nevada

Description: A guide of essential math concepts necessary to build a sequential program through the elementary school. Concepts are arranged in a continuous pattern. The curriculum guide is accompanied by criterion-referenced tests for each grade level. Tests are machine scorable and alternate forms are available.

SOURCE REFERENCE

44. Ms. Hattilu M. Moore, Principal
Prairie View Elementary School
1801 S. E. 32nd Place
Gainesville, Florida 32601

45. Moreland School
Snake River District #52
Moreland, Idaho

| | | |
|------------------|---|---|
| Topics Included: | <u>Number</u> <u>Sets</u> <u>Whole Numbers (Cardinals)</u> <u>Rational Numbers</u> <u>Integers</u> <u>Irrational Numbers</u> <u>Ordinal Numbers</u> | <u>Numeration</u> A Number has many Names <u>Whole Numbers</u> <u>Rational Numbers</u> <u>Integers (Notation)</u> <u>Irrational Numbers</u> <u>Other Notation</u> |
| | <u>Operations</u> <u>Whole Numbers</u> <u>Rational Numbers</u> <u>Integers</u> | <u>Measurement</u> <u>Concepts of Measurement</u> <u>Measurement of Physical Properties (Standard Units)</u> <u>Renaming Measures</u> <u>Computations with Measures</u> |
| | <u>Geometry</u> <u>Geometric Figures</u> <u>Properties</u> <u>Constructions</u> | |

44. Mathematics Levels Program (K-I) - Prairie View Elementary School, Gainesville, Florida

Description: A detailed mathematics guide for the elementary school. A spiral approach is used with the same topics occurring in each grade and at increasingly more difficult levels. It includes suggested materials and equipment, activities and games, evaluation procedures, and an in-depth discussion of the first grade program.

Topics Included: Number and the Study of Sets
Numbers and Systems of Numeration
Mathematical Operation I - Whole Numbers
Mathematical Operation II - Fractions
Geometry
Graphing

45. Individualized Nongraded K-3 Math Program (K-P) - Moreland School, Snake River District No. 52, Moreland, Idaho

Description: Description of an individualized mathematics program which includes scope and sequence charts, behavioral objectives and evaluation instruments.

SOURCE REFERENCE

46. Publications c/o Mrs. Mary Starr
State Department of Education
State Office Building
Boise, Idaho 83707

| | | |
|------------------|--|---|
| Topics Included: | <u>Number & Operations</u> The Natural Numbers -Counting & Numeration The Natural Numbers -Add, Sub, Mult, Div The Rational Numbers The Rational Numbers -Add, Sub, Mult, Div The Integers The Irrational Numbers | <u>Sets, Functions, Relations, Systems, and Logic</u> Sets Relations & Functions Mathematical Sentences Systems & Logic |
| | <u>Geometry</u> Non-metric Geometry Metric Geometry | <u>Measurements & Estimation</u> Concept of Measurement Measurable Quantities Renaming Measures Computations with Measure |

46. Idaho Curriculum Guide in Mathematics (K-JH) - State of Idaho Department of Education, Boise, Idaho

| | | |
|------------------|--|---|
| Description: | A comprehensive guide for the teaching of mathematics arranged by grade level. The organization of topics reflects a consistent spiral approach throughout the guide. It includes major topics, objectives, and teaching aids. In addition there are supplementary materials, tables, and problems listed in the appendix. | |
| Topics Included: | <u>Number & Operations</u> Natural Numbers - Counting & Numeration Natural Numbers - Add, Sub, Mult, Div Rational Numbers Rational Numbers - Add, Sub, Mult, Div Integers Irrational Numbers | <u>Sets, Functions, Relations, Systems & Logic</u> Sets Relations & Functions Mathematical Sentences Systems & Logic |
| | <u>Geometry</u> Non-metric Geometry Metric Geometry | <u>Measurements & Estimation</u> Concept of Measurement Measurable Quantities Renaming Measures Computations with Measure |

SOURCE REFERENCE

47. Mr. Clyde E. Stevens
Superintendent of Schools
District School Board of Lake County
201 W. Burleigh Boulevard
Tavares, Florida 32778
48. Mr. George M. Gibbs, Coordinator
Division of Curriculum Services
Fairfax County Public Schools
10700 Page Avenue
Fairfax, Virginia 22030
49. Dr. John A. Dow
Research for Better Schools, Inc.
1700 Market Street
Philadelphia, Pennsylvania 19103

47. Lake County Mathematics Continuum and Resource Guide (K-JH) - Lake County School System, Tavares, Florida

Description: A sequential program of concepts and skills in mathematics. The guide is organized by topic; each topic consists of a continuum of skills for levels A-I (K-JH). Includes objectives, examples and related resources for each objective. Objectives only are available in a separate document entitled 'Mathematics Continuum'. Two additional documents related to the Continuum are also available: 'Mathematics Placement Tests' and 'Mathematics Mastery Tests'.

| | | |
|------------------|---------------------------|---------------------|
| Topics Included: | Numeration | Non-metric Geometry |
| | Addition & Subtraction | Metric Geometry |
| | Multiplication & Division | Geometry |
| | Fractions | Time |
| | Rational Numbers | Money |
| | Decimals | Special Topics |
| | Integers | |

48. Reporting to Parents: Mathematics (K-JH) - Fairfax County Public Schools, Fairfax, Virginia

Description: A booklet listing objectives in mathematics to be completed by each student at each grade level. A space is provided for indicating the date on which the student attained the objective. The form is used as a reporting vehicle to the parents.

| | | |
|------------------|--|-------------------------------|
| Topics Included: | Numeration | Enrichment |
| | Whole Numbers & Operations | Measurement |
| | Fractions & Operations | Money & Time |
| | Mixed Operations | Integers & Operations |
| | Equations, Inequalities, Graphs; Proportions & Percent | Rational Numbers & Operations |
| | | Geometry |

49. Math Levels A-G (P-I) - Research for Better Schools, Inc., Philadelphia, Pennsylvania

Description: An outline of objectives in elementary mathematics, listed by topic within a level. Levels indicate objectives of greater or lesser complexity for any given topic.

SOURCE REFERENCE

50. Office of the Superintendent
Greece Central School District #1
Rochester, New York
51. Mrs. Mary D. Gibb
Director of Staff Development
Monroe County School System
Key West, Florida 33040
52. Mr. Otis E. Williams, Jr.
Product Manager BLM
425 North Michigan Avenue
Chicago, Illinois 60611

| | | |
|------------------|--|--|
| Topics Included: | Numeration Place Value Addition Subtraction Multiplication Division Combination of Processes | Fractions Money Time Systems of Measurement Geometry Applications Special Topics |
|------------------|--|--|

50. Mathematics Assessment Program (P-I) - Greece, New York

***Description:** The Mathematics Assessment Program (MAP) is a computer-based system for monitoring the progress of students in mathematics. Contained within the package are objectives for assessing mastery and for diagnosis of specific learning difficulties. The tests are criterion-referenced to aid the teacher in determining the effectiveness of his or her teaching.

51. Mathematics Objectives (P-I) - Monroe County School System, Key West, Florida

| | | |
|------------------|---|--|
| Description: | Presents elementary mathematics objectives within twelve levels, with given topics recurring at several levels. | |
| Topics Included: | Readiness Sets Addition & Its Inverse Measurement & Units of Measurement Geometry | Multiplication & Its Inverse Solving Verbal Problems History of Mathematics Early Number Systems Statistics & Probability Place Value |

52. The "Telling Time" Audio-Tutorial Program (P-I) - Encyclopaedia Britannica Educational Corporation, Chicago, Illinois

Description: The telling time audio-tutorial program consists of four 15-minute lessons designed to teach key concepts and skills. The materials are complete teaching units, utilizing audio instruction and manipulative materials. Each lesson states prerequisite skills necessary to complete the lesson and objectives for the lesson.

SOURCE REFERENCE

53. Dr. Barbara S. Prentice
Director of Research
Tucson Public Schools
P. O. Box 4040
Tucson, Arizona 85717

54. Mr. Don Boehmer
Director, Special Education
Barnes County Courthouse
Valley City, North Dakota 58072

53. Sequence of Whole Numbers, Sequence of Measurement and Measurement: Time (P-JH) - Tuscon Public School District, Tuscon, Arizona

| | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|-----------------------------------|----------------------------------|-----------------------------------|---------------------------|---------|-----------------|----------------------|---------------|----------------------|------|-----------------------|------------------|-----------|---------------|--------------|-------------|---------------------------|--------------------|-------------------|
| Description: | Three documents, each containing a sequence of behavioral objectives for a different area. Each reflects a spiral approach. | | | | | | | | | | | | | | | | | | | |
| Topics Included: | <table border="0"> <tr> <td style="text-align: center;"><u>Sequence of Whole Numbers</u></td><td style="text-align: center;"><u>Measurement Sequence: Time</u></td></tr> <tr> <td>One-to-one Correspondence</td><td>Symbols</td></tr> <tr> <td>Concept of Zero</td><td>Commutative Property</td></tr> <tr> <td>Number System</td><td>Associative Property</td></tr> <tr> <td>Sets</td><td>Distributive Property</td></tr> <tr> <td>Basic Operations</td><td>Relations</td></tr> <tr> <td>Power & Roots</td><td>Base Systems</td></tr> <tr> <td>Coordinates</td><td>Prime & Composite Numbers</td></tr> <tr> <td>Ratio & Proportion</td><td>Modulo Arithmetic</td></tr> </table> | | <u>Sequence of Whole Numbers</u> | <u>Measurement Sequence: Time</u> | One-to-one Correspondence | Symbols | Concept of Zero | Commutative Property | Number System | Associative Property | Sets | Distributive Property | Basic Operations | Relations | Power & Roots | Base Systems | Coordinates | Prime & Composite Numbers | Ratio & Proportion | Modulo Arithmetic |
| <u>Sequence of Whole Numbers</u> | <u>Measurement Sequence: Time</u> | | | | | | | | | | | | | | | | | | | |
| One-to-one Correspondence | Symbols | | | | | | | | | | | | | | | | | | | |
| Concept of Zero | Commutative Property | | | | | | | | | | | | | | | | | | | |
| Number System | Associative Property | | | | | | | | | | | | | | | | | | | |
| Sets | Distributive Property | | | | | | | | | | | | | | | | | | | |
| Basic Operations | Relations | | | | | | | | | | | | | | | | | | | |
| Power & Roots | Base Systems | | | | | | | | | | | | | | | | | | | |
| Coordinates | Prime & Composite Numbers | | | | | | | | | | | | | | | | | | | |
| Ratio & Proportion | Modulo Arithmetic | | | | | | | | | | | | | | | | | | | |
| | <u>Sequence of Measurement</u> | <u>Measurement Sequence: Time</u> | | | | | | | | | | | | | | | | | | |
| | Beginning Measuring | Telling Time | | | | | | | | | | | | | | | | | | |
| | Arbitrary Units | Reading Notation | | | | | | | | | | | | | | | | | | |
| | Unit Changes | Writing Notation | | | | | | | | | | | | | | | | | | |
| | Standard Units | Naming Days & Months | | | | | | | | | | | | | | | | | | |
| | Precision | Oral Reading of "to the hour" | | | | | | | | | | | | | | | | | | |
| | Relative Error | | | | | | | | | | | | | | | | | | | |
| | Multiplying & Dividing Measurements | | | | | | | | | | | | | | | | | | | |

54. Guideposts Along the Way: An Arithmetic Guide for the Educable Mentally Handicapped Students in Special Classes (P-SH) - Barnes County, Valley City, North Dakota

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|--|-------------------|------------------------|---------------|--------------------|-----------------------|----------------|-------------|-------------|---------------------------|----------|--------------------------|-------|-------|-----------|-------------|----------------|----------|----------------|-------------|----------|------------------------------|----------|----------------------------------|-------------|
| Description: | A mathematics curriculum for educable mentally handicapped students. Includes goals, specific objectives, suggested resources, and work sheets. Within a topic, objectives are classified as P, I, JH or SH. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Topics Included: | <table border="0"> <tr> <td>Spatial Awareness</td><td>Number Symbol Sequence</td></tr> <tr> <td>Rote Counting</td><td>Writing & Spelling</td></tr> <tr> <td>Geometric Form - Size</td><td>Number Symbols</td></tr> <tr> <td>Comparisons</td><td>Place Value</td></tr> <tr> <td>Number Symbol Recognition</td><td>Calendar</td></tr> <tr> <td>One-to-one Relationships</td><td>Clock</td></tr> <tr> <td>Money</td><td>Fractions</td></tr> <tr> <td>Measurement</td><td>Roman Numerals</td></tr> <tr> <td>Addition</td><td>Multiplication</td></tr> <tr> <td>Subtraction</td><td>Division</td></tr> <tr> <td>Grouping by 2's, 5's, & 10's</td><td>Decimals</td></tr> <tr> <td>Meters, Graphs, Schedules & Maps</td><td>Percentages</td></tr> </table> | | Spatial Awareness | Number Symbol Sequence | Rote Counting | Writing & Spelling | Geometric Form - Size | Number Symbols | Comparisons | Place Value | Number Symbol Recognition | Calendar | One-to-one Relationships | Clock | Money | Fractions | Measurement | Roman Numerals | Addition | Multiplication | Subtraction | Division | Grouping by 2's, 5's, & 10's | Decimals | Meters, Graphs, Schedules & Maps | Percentages |
| Spatial Awareness | Number Symbol Sequence | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rote Counting | Writing & Spelling | | | | | | | | | | | | | | | | | | | | | | | | | |
| Geometric Form - Size | Number Symbols | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comparisons | Place Value | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number Symbol Recognition | Calendar | | | | | | | | | | | | | | | | | | | | | | | | | |
| One-to-one Relationships | Clock | | | | | | | | | | | | | | | | | | | | | | | | | |
| Money | Fractions | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement | Roman Numerals | | | | | | | | | | | | | | | | | | | | | | | | | |
| Addition | Multiplication | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtraction | Division | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grouping by 2's, 5's, & 10's | Decimals | | | | | | | | | | | | | | | | | | | | | | | | | |
| Meters, Graphs, Schedules & Maps | Percentages | | | | | | | | | | | | | | | | | | | | | | | | | |

SOURCE REFERENCE

55. Mr. Donald Holquist
Mineola High School
Garden City Park, New York 11040

56. Ms. Jane J. Leonard
University School
Florida State University
Tallahassee, Florida 32306

55. Mathematics Objectives (P-SH) - Mineola High School, Garden City Park, New York

Description: A sequential listing of objectives, by unit, for a total mathematics curriculum, grades one to twelve. Each of the 67 topical units includes a listing of sub-topics, definitions, and specific objectives for each sub-topic.

| | | |
|------------------|------------------------|--------------------|
| Topics Included: | Whole Numbers | Decimals |
| | Sets | Ratio & Proportion |
| | Properties of Numbers | Percents |
| | Primes & Composites | Measurement |
| | Integers | Geometry |
| | Fractions | Probability |
| | Statistics | Flowcharts |
| | Rational Numbers | Programma |
| | Scientific Notation | Business Tables |
| | Squares & Square Roots | Algebra |
| | Real Numbers | Trigonometry |
| | Precision & Accuracy | Slide Rule |

56. Intermediate Math Continuum (I) - University School, Florida State University, Tallahassee, Florida

Description: A compilation of mathematics objectives which includes tasks, specific objectives, and sample test items.

| | | |
|------------------|----------------|----------------------|
| Topics Included: | <u>Grade 4</u> | <u>Grade 6</u> |
| | Sets | Place Value |
| | Numbers | Whole Number Systems |
| | Place Value | Computing |
| | Addition | Number Theory |
| | Subtraction | Fractions |
| | Multiplication | Ratio |
| | Division | Decimals |
| | Estimating | Set Theory |
| | Fractions | Numeration Systems |
| | Decimals | Clock Arithmetic |
| | Measurement | Logic |
| | Geometry | |
| | Number Theory | |

Grade 5 not available as of March, 1972

SOURCE REFERENCE

57. Mr. Jerry Sullivan
Associate Regional Manager
CTB/McGraw-Hill
1375 Peachtree Street, N. E.
Atlanta, Georgia 30309

58. Dr. Raymond Bernabei
Intermediate Unit #22
Administration Building - 7th Floor
Bucks County Public Schools
Doylestown, Pennsylvania 18901

57. Prescriptive Mathematics Inventory - PMI (I-JH) - CTB/McGraw-Hill, Atlanta, Georgia (Specimen Set - \$4.00)

Description: The PMI is designed to provide diagnostic and prescriptive information concerning specific objectives. The PMI is divided into three levels: Level A - grades 4 & 5, Level B - grades 5-7, Level C - grades 7 & 8. The items sample various levels of difficulty in each of the content categories represented. The Teacher's Guide gives a listing of the objectives upon which the PMI is based. Different levels have different numbers of items for any given objective.

| | | |
|-------------------------|-------------------------------|---------------------------|
| Topics Included: | Operations on the Number Line | Number Sequences |
| | Whole Numbers | Missing Addends & Factors |
| | -Add, Sub, Mult, Div | Number Theory |
| | Positive Fractions | Mathematical Sentences |
| | -Add, Sub, Mult, Div | Measurement |
| | Decimal Numbers | Place Value |
| | -Add, Sub, Mult, Div | Numeration Systems |
| | Negative Integers | Non-Metric Geometry |
| | Negative Fractions | Percent |
| | Rounded Numbers | Sets |
| | Commutative Property | Functions & Graphs |
| | -Associative Property | Statistics |
| | Distributive Property | Probability |
| | Identity Element | Trigonometry |
| | Inverse Relation | Reasoning |
| | Closure | |

58. Behavioral Objectives Curriculum Guide: Mathematics Grade Seven (JH) - Bucks County Public Schools, Doylestown, Pennsylvania (\$3.00)

Description: Three manuals of objectives for mathematics: grade seven - below average, grade seven - average, and grade seven, above average. Concepts presented are part of the whole program and not unique to any subdivision. For each objective the guide contains: estimated time for student accomplishment, behavioral conditions, behavioral indicators, performance level outcomes, and suggested performance assessment.

Topics Included: Sets
Non-Metric Geometry
Numbers & Numerals
Measurement & Geometry
Equations

SOURCE REFERENCE

59. Educational and Industrial Testing Service
Box 7234
San Diego, California 92107

59. Individualized Mathematics Program - IMP: Individually Prescribed Instruction Based on Performance Objectives (JH) - Educational and Industrial Testing Service, San Diego, California (\$98.00/class).

Description: The IMP provides for a continual assessment of student progress, diagnosis of learning difficulty, and prescription of instruction. The IMP contains preassessment instruments - Tests of Achievement in Basic Skills (TABS-IMP), Checklists of objectives, lesson units correlated with the objectives, and post assessment instruments (TAP-IMP).

Topics Included:

- Arithmetic Skills
 - Whole Numbers (Basic Operations)
 - Integers (Basic Operations)
 - Fractions
 - Basic Operations
 - Reduction
 - Proper
 - Improper
 - Mixed Numbers
 - Rational Numbers (Definitions)
 - Decimals (Basic Operations)
 - Percent
 - Irrational Numbers (Definitions)
 - Literal Number
 - Combination
 - Multiplication
 - Division
- Geometry - Measurement & Application
 - Geometric Figures
 - Perimeter
 - Area
 - Pythagorean Theorem
 - Time Measurement
 - Linear Measurement
 - Volume Measurement
 - Application of Measurement
 - Proportion
- Modern Concepts
 - Prediction of Sequences
 - Ordered Pairs - Linear Functions
 - Intersection and Union of Sets
 - Expanded Notation
 - Other Number Bases
 - Base Two Operations
 - Inequalities
 - Number Properties
 - Divisibility Rules
 - Primes

SOURCE REFERENCE

60. Dr. John A. Dow
Research for Better Schools, Inc.
1700 Market Street
Philadelphia, Pennsylvania 19103
61. Mr. Reeves Gandy
Senior Editor - Listen Look Learn
Educational Development Laboratories, Inc.
Huntington, New York 11743
62. Dr. Margaret Houlahan
Division of Evaluation and Research
St. Louis Public Schools
St. Louis, Missouri

READING

60. Individually Prescribed Instruction - Reading Objectives (K-I) - Research for Better Schools, Philadelphia, Pennsylvania

Description: A working paper listing student skills for eleven levels, with multiple skills listed within each major topic. Also included are sample test items for each skill.

| | | |
|------------------|---|---|
| Topics Included: | Visual Discrimination Auditory Discrimination Literal Comprehension Interpretive Comprehension Evaluative Comprehension Library Skills | Related Reading Vocabulary Development Reference Skills Structural Analysis Organizational Skills |
|------------------|---|---|

61. Performance Objectives for Listen Look Learn Cycles R-100: A Multi-Media Communication Skills System (K-I) - Educational Developmental Laboratories, A Division of McGraw-Hill Book Company, Huntington, New York

Description: A bulletin which identifies the specific goals of the Listen Look Learn system in areas related to visual and auditory perception, vocabulary development, and reading fluency. Listen Look Learn is a non-graded multi-media, communications skills system emphasizing basic reading and related language arts skills.

62. Reading Comprehension: Primary and Middle Grades (K-I) - St. Louis Public Schools, St. Louis, Missouri

Description: A two volume set containing objectives adapted from the Instructional Objectives Exchange at U.C.L.A. Also included are sample test items, possible answers to the items, and references to sources of supplementary materials.

| | | |
|-------------------------|----------------|------------------------------|
| Topics Included: | <u>Primary</u> | |
| Determining Story Facts | | Personal Traits & Emotional |
| Sequence | | Reaction of Story Characters |
| Locating Specific | | Comparing & Contrasting |
| Information | | Predicting Outcomes |
| Main Idea | | Fact & Fantasy |

SOURCE REFERENCE

63. Dr. Jeannette Jarecke
Director of Reading K-12
School Board of Broward County
1320 Southwest Fourth Street
Fort Lauderdale, Florida 33312

64. Dr. Dale Wiesenecker
Assistant Superintendent for Instruction
Reading Skills Reference Guide
Brevard County Schools
P. O. Box 5
Titusville, Florida

Middle Grades

| | |
|---------------------------------|-------------------------------|
| Charts | Drawing Conclusions |
| Locating Specific Information | Interpretation of Facts |
| Reading for Details | Predicting Outcomes |
| Main Idea | Making Inferences |
| Organizing to Show Sequence | Using Context |
| Seeing Relationships | Figurative Language |
| Recognizing Emotional Attitudes | Distinguishing Fact & Fancy |
| Observing Characterization | Distinguishing Fact & Opinion |
| | Comparing & Contrasting |

63. Reading Probes (K-I) - Broward County Public Schools, Ft. Lauderdale, Florida

| | | |
|------------------|---|---|
| Description: | A skills booklet for elementary school reading; objectives, oral directions and pupil response sheets are included. | |
| Topics Included: | Multisensory Readiness Vocabulary Skills Study Skills | Decoding Skills Comprehension Skills |

64. Reading Skills Reference Guides - Primary and Intermediate (K-I) - Brevard County Schools, Titusville, Florida

| | | |
|------------------|--|---|
| Description: | Each guide is a sequential presentation of skills (objectives) in the Scott Foresman Reading Series and developmental patterns of organization for using appropriate supportive materials. The zones of learning in the Guide are based upon the sequential development of skills as presented in the Scott Foresman Series. Each zone introduces new learnings appropriate to that level, and reinforces skills and understandings that have been introduced in previous zones. Each guide has a Basic program and an In-depth program. | |
| Topics Included: | <u>Primary</u> Sentence Meaning Sensory Images Emotional Reactions Motives Relationships Visual Perception Auditory Perception Scrutiny Context Phonetic Analysis Structural Analysis Dictionary Skills | <u>Intermediate</u> Word & Phrase Meaning Sentence & Paragraph Meaning Main Idea Relationships Critical Reading Locating Information Word Analysis Dictionary |

SOURCE REFERENCE

65. Dr. Mark Shedd
Superintendent of Schools
School District of Philadelphia
Philadelphia, Pennsylvania 19103

66. Mr. Michael Fratella, Principal
Lake Forest Elementary School
427 Southeast 43rd Street
Gainesville, Florida

65. System for Reading Improvement for the 70's (K-I) - School District of Philadelphia, Philadelphia, Pennsylvania

Description: A progress report providing a description of the program, the philosophy, and the plan of operation for the system. An appendix contains an outline of reading competencies, with both pupil and teacher objectives stated. Five topics are dealt with at nine levels of difficulty, reflecting a spiral approach.

Topics Included: Mechanics of Handling Books
Word Recognition Skills
Comprehension
Study Skills
Appreciation of Literature

66. Systematic Study for Improving Reading Skills of Lake Forest Students (K-I) - Lake Forest Elementary School, Gainesville, Florida

Description: A two document set, the first of which contains an overall description of the program, including the philosophy, the student population, review of research, current methods, survey of current programs, survey of resources, and the student objectives and needs. The second contains activities, resources, and evaluation strategies for the student objectives.

Topics Included: Developing Reading Readiness
Physical Development
Emotional and Social Development
Educational Development

Develop Sight Vocabulary

Develops Phonic Analysis
Visual & Auditory Symbols

Develops Structural Analysis of Words
Compound Words
Prefixes, Suffixes & Roots
Syllabication
Accentuation

Learns to Use Context Clues to Recognize
& Obtain Word Meanings

Vocabulary

Developing Skills in Comprehension
Information Skills
Study Skills
Interpretive Skills
Creative Skills

Learns Effective Use of the Dictionary
As an Aid to Pronunciation

SOURCE REFERENCE

67. Dr. Richard E. Schutz
Executive Director
Southwest Regional Laboratory
11300 LaCienega Boulevard
Inglewood, California 90304
68. Mr. Hilton F. Jones, Sr.
Superintendent of Schools
Dixie County Schools
Cross City, Florida
69. Dr. Fred Phillips
Assistant Superintendent
Curriculum and Instruction
Birmingham Board of Education
P. O. Drawer 10007
Birmingham, Alabama 35202
70. School Division
The MacMillan Company
255 Ottley Drive, N. E.
Atlanta, Georgia 30324

67. The Learning Mastery System (K-P) - Southwest Regional Laboratory of Educational Research and Development, Inglewood, California

***Description:** A computer-based management system designed to facilitate the identification, reporting, and individual guidance of pupil progress with respect to specific instructional outcomes. It contains a Teachers Manual, Criterion Exercises, Practice Exercises, and Class Record sheets.

68. A Learning Design for Reading (K-SH) - Dixie County Schools, Cross City, Florida

Description: A document containing student objectives, suggested learning tasks, and instructional resources. Tasks and resources are given for each objective. An appendix contains sources of instructional materials.

| | | |
|-------------------------|---|--|
| Topics Included: | Pre-Reading Background Experience | Interpretation of Literary Content & Merit |
| | Beginning Reading | Reading Interest & Appreciations |
| | Vocabulary Development | Work Study Skills |
| | Word Recognition Skills | Approaches to Outcomes |
| | Understanding Comprehension, & Critical Reading Skill | of Reading |
| | Personal Development Through Reading | |

69. A Program Description (K-SH) - Birmingham Public Schools, Birmingham, Alabama

Description: Program objectives and assessment techniques for Title I children at four levels: Kindergarten, Early Elementary (1-3), Later Elementary (4-6), and Secondary (7-12).

70. Behavioral Objectives - The MacMillan Reading Program (P) - The MacMillan Company, Atlanta, Georgia

Description: The program includes objectives, mastery tests, workbook exercises, practice exercises and provisions for individual differences.

SOURCE REFERENCE

71. Mr. Charles Smyth, Vice-President
Random House
School Department
201 East 50th Street
New York, New York 10022

| | | |
|------------------|---|---|
| Topics Included: | <u>Reading Readiness</u> <u>Basic Behavioral Skills</u> <u>General Language Skills</u> <u>Visual Discrimination</u> <u>Auditory Discrimination</u> | <u>Comprehension</u> <u>Words, Phrases, Sentences</u> <u>& Paragraphs</u> <u>Literal Comprehension</u> <u>Inferential Comprehension</u> |
| | <u>General Reading Skills</u> <u>Using Printed Material</u> <u>Appropriately</u> <u>Silent Reading</u> <u>Oral Reading</u> | <u>Attitudes, Interests, & Appreciation</u> <u>Develops Interest in Reading</u> <u>Improves & Refines Reading Interests</u> |
| | <u>Word Identification</u> <u>Using Phoneme-Grapheme Relationships</u> <u>Using Context Clues to Identify Words</u> <u>Using Minimal Variation</u> <u>Knowing & Applying Phonic Generalizations</u> <u>Using Kinesthetic Procedure to Reinforce Perception, Identification, & Recall</u> <u>Practicing Good Word-Preception Habits</u> <u>Using Self-Help Cues, Dictionary, or Glossary to Discover Pronunciation of New Words</u> <u>Recognizing Learned Words Without Benefit of Context</u> <u>Demonstrating a Growing Sight Vocabulary</u> | |
| | <u>Morphemic Analysis & Graphic Cues</u> <u>Phonemic & Meaning Implications of Inflectional Endings</u> <u>Compound Words in Which Components are Known Words</u> <u>Phonemic & Meaning Implications of Affixes</u> <u>Root Word in a Word with Prefixes and/or Suffixes</u> <u>Combining Cues in Identifying Words</u> <u>Meaning Implications of Graphic Clues</u> | |
| | <u>Study Skills</u> <u>Self-Help Picture & Sentence Cues</u> <u>Dictionary Identification of Words, Pronunciation & Meanings</u> <u>Locating Needed Reading Material</u> <u>Outlining & Summarizing Material Read</u> | |

71. Criterion Reading System (P-I) - Random House, New York, New York

Description: Identifies 488 intellectual skills arranged from the most simple to the complex. Within the performance-based, criterion-referenced system six areas of expected competencies are identified and sequenced in five levels of complexity. The identification of both outcome and process skills provides the basis for diagnosis, reading instruction, and student mastery.

SOURCE REFERENCE

72. Dr. Hazen Curtis
Department of Educational Research
Florida State University
Tallahassee, Florida 32306

Topics Included: Sensorimotor Skills
 Phonology Skills
 Syntax Skills

Structural Analysis Skills
 Verbal Information Skills
 Comprehension Skills

72. Florida Agricultural Migrant Right-to-Read Program: A Suggested Set of Objectives (P-I) - Florida State Department of Education, Tallahassee, Florida

Description: A set of suggested behavioral objectives, and examples, for the Florida Migrant Right-to-Read Program. Objectives are presented in outline form by topic and by level (12) within topic.

Topics Included: Oral-Aural Skills
 Listening
 Speaking
 Oral Interpretation
 Oral Language Structure

Vocabulary Development
 Sight Vocabulary
 Word Meaning

Word Analysis
 Phonetic Recognition
 Structural Recognition
 Context

Comprehension
 Main Ideas
 Specific Information
 Critical Reading

Attitudes & Appreciation
 Attitudes
 Children's Literature

Study Skills
 Alphabet Usage
 Outlining
 Read From Maps, Tables & Graphs
 Dictionary Skills
 Library Skills
 Abbreviations
 Parts of Books
 Reading Rate

Applications
 Vocabulary
 Oral-Aural Skills
 Word Analysis
 Comprehension
 Study Skills

SOURCE REFERENCE

73. Mr. Jerry Sullivan
Associate Regional Manager
CTB/McGraw-Hill
1375 Peachtree Street, N.E.
Atlanta, Georgia 30309
74. Dr. Wayne Otto
Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
Madison, Wisconsin
75. Mrs. Lois Tjaden
Supervisor of Reading and Elementary
Language Arts
Sarasota County School District
2418 Hatton Street
Sarasota, Florida 33577

73. Prescriptive Reading Inventory - PRI (P-I) - CTB/McGraw-Hill, Atlanta, Georgia

Description: The PRI is designed to provide diagnostic and prescriptive information concerning specific objectives and is divided into levels. The items sample various levels of difficulty in each of the content categories represented. The Teacher's Guide gives a listing of the objectives upon which the PRI is based. Different levels have different numbers of items for any given objective.

The PRI is still under development. More specific information as to topics is not yet available.

74. The Wisconsin Design for Reading Skill Development (WDRSD) (P-I) - The University of Wisconsin, Madison, Wisconsin (\$700.00)

***Description:** WDRSD focuses on the skill development aspect of reading instruction in the elementary school. Explicit objectives are stated for the areas of word attack, comprehension, and study skills. Skills in Self-Directed Reading, Interpretive Reading, and Creative Reading are accompanied by general guidelines or "open" objectives. WDRSD is based on a collection of reading skills believed to be essential for competence in reading. The purpose of WDRSD is to expedite individually guided education in reading by providing the teachers with: means for assessing individual pupil's skill development with reference to criterion behavior, a comprehensive management system to guide grouping for, and planning of, skill development instructions, and a plan for monitoring each pupil's progress in the development of specific reading skills.

75. Sarasota County Objectives in Reading and English, SCORE (P-SH) - The School Board of Sarasota County, Sarasota, Florida

Description: A continuous hierarchy of goals and objectives for basic tasks and skills, ranging from simple prerequisite skills to advanced complex skills. Also includes evaluation and feedback procedures.

| | | |
|-------------------------|---|--|
| Topics Included: | Motor Development & Motor Integration Perceptual-Motor Symbolic Development Word Recognition Skills | Comprehension Skills Study Skills Creative Application Personal & Individual Reading Life Skills |
|-------------------------|---|--|

SOURCE REFERENCE

76. Research Press Company
P. O. Box 3177
Champaign, Illinois 61820

76. Pass Packet (I) - Research Press Company, Champaign, Illinois

Description: A systematic program for skill maintenance in 4th, 5th and 6th grade reading, math, and language arts through a series of 80 curriculum-centered sets of work materials for each grade.

Topics Included:*

Read & Think Skills

- Sequence & Specific Information
- Interpreting Details and Main Ideas
- Relationships
- Identify Reasons for Writing
- Distinguishing Fact from Fiction
- Seeing Literary Style
- Predicting Outcomes

Sentence Sense

- Recognizing Sentences
- Sentence Structure
- Capitalization
- Adjectives
- Alphabetical Order
- Contractions
- Punctuation
- Possessives

Word Attack

- Root Words, Prefixes & Suffixes
- Syllabication
- Antonyms & Synonyms & Compound
- Contractions
- Word in Context Clues
- Word in Glossaries

Math

- Reading Numbers
- Add
- Subtract
- Multiply
- Divide

Sight & Sound

- Consonants & Consonant Combinations
- Vowels & Vowel Combinations

Using English

- Noun Forms
- Irregular Verbs
- Pronoun Forms
- Homonyms
- Difficult Adverbs

*4th grade topics only - 5th and 6th grade not reviewed

SOURCE REFERENCE

77. Xerox Education Division
600 Madison Avenue
New York, New York 10022
78. Mr. Jack Allen
Director of Curriculum
Multnomah County Intermediate
Education District
P. O. Box 16657
Portland, Oregon 97216
79. Dr. George T. Gabriel, Director
Office of Educational Research
Board of Education of Baltimore County
Towson, Maryland 21204

SCIENCE

77. Science - A Process Approach (K-I) - Xerox Corporation, Carlstadt, New Jersey

| | | |
|------------------|--|--|
| Description: | The AAAS, Science - A Process Approach, is a comprehensive program for teaching science in the elementary school. Each exercise is organized under a general topic heading and includes objectives, sequence, rationale, vocabulary, materials, instructional procedure, generalizing experience, appraisal, and competency measures. The objectives for the primary grades are classified as basic processes, while those for the intermediate grades are classified as integrated processes requiring the combination of two or more basic ones. | |
| Topics Included: | <u>Primary</u> Observing Using Space/Time Relationships Classifying Using Numbers Measuring Communicating Predicting Inferring | <u>Intermediate</u> Controlling Variables Interpreting Data Formulating Hypotheses Defining Operationally Experimenting |

78. Tri-County Area Course Goal Collection in Biological and Physical Science (K-SH) - Multnomah County Intermediate Education District, Portland, Oregon

| | |
|---------------|---|
| *Description: | A collection of goal statements arranged in a hierachial manner to reflect the need for greater specificity as one progresses from the district level, through the program level, down to the course level. A fourth level of goal statement is the teacher made goal statement. Goals at this level, however, are not specified by the district. |
|---------------|---|

79. Summary Report of NSSA - Workshops on Behavioral Objectives - Science (P-SH) - Board of Education of Baltimore County, Towson, Maryland

| | |
|--------------|--|
| Description: | An outline of affective objectives for science. Also included are a list of behavioral verbs and examples of related behavior. |
|--------------|--|

SOURCE REFERENCE

80. Mr. Lloyd Otterman
General Manager
Box 11607
Santa Ana, California 92705

81. Mr. Charles R. Davis, Jr.
Assistant Supervisor of Science
State Department of Education
Richmond, Virginia 23216

Topics Included:

| <u>Awareness of Conditions</u> | |
|--|---|
| Relates to Science | People of Science |
| The Interaction of Science & Technology | Science Grows |
| The Interaction of Science & The Arts | Science Advances |
| Limitations of Science | Mankind |
| | Inquiry |
| | Scientific Climate |
| <u>Acceptance of Values</u> | |
| Superstition | Considered Response |
| Weighing Evidence | Science as a Basic Part of Modern Living |
| <u>Preference for Values</u> | |
| Curiosity | Patience |
| Persistence | Open-Mindedness |
| Confidence in Scientific- Method | Intellectual Satisfaction |
| Enjoyment from Science | Creativity |

80. Independent Learning Program (I) - Doubleday Multimedia, Santa Ana, California

Description:

Multimedia packages containing filmloops, records and written materials. Objectives are embedded within total learning package which also includes pre and post tests, learning activities, quest study activities and references. Five major topics are dealt with in this series. For each topic, four physical characteristics (color, body structure, locomotion, sense) and four behavior patterns (getting food and water, protection, reproduction, caring for young) are dealt with.

Topics Included:

| | |
|---------------------------|-------|
| Animals Without Backbones | Fish |
| Reptiles | Birds |
| Mammals | |

81. Earth and Space Science (JH) - Virginia State Department of Education, Richmond, Virginia

Description:

A curriculum guide outlined by significant ideas in earth and space science. The guide includes goals, specific objectives, suggested student investigation, activity references and reading references.

SOURCE REFERENCE

82. Mr. Charles R. Davis, Jr.
Assistant Supervisor of Science
State Department of Education
Richmond, Virginia 23216

Topics Included: The Land on Which We Live

The Earth's Structure
 The Earth's Crust
 Changes in Topography
 Transfer of Energy
 Rocks and Minerals
 History of the Earth
 Topographic & Geologic Maps

The Waters of the Earth

The Distribution of Land and Sea
 Shoreline Evolution & Features
 Vertical Structure of the Ocean
 Sea Water
 Topography of the Ocean Bottom
 Energy Changes in the Ocean
 Life in the Ocean
 Ocean Resources

The Earth & Its Place in the Universe

Overview
 Motions
 The Solar System
 Locating & Ranging
 The Stars
 Time
 Origin of the Universe
 Satellites & Space Travel

The Everchanging Atmosphere

The Sea of Air
 Weather & Climate

82. Physical Science (JH) - Virginia State Department of Education, Richmond, Virginia

Description:

A curriculum guide outlined by significant ideas in earth and space science. The guide includes goals, specific objectives, suggested student investigations, and teacher notes and references.

Topics Included:

Measurement of MatterProperties of Matter

Thermal Conversion Points

Thermal Expansion

Specific Heat

Solubility

Interaction of Energy With Matter

Objects in Motion

Classification of Matter

Physical Properties

Organization of Components

Structure of Matter

Radioactivity

Atomic Theory

Energy, How it is Observed

SOURCE REFERENCE

83. Mid-Continent Regional Laboratory
104 East Independence Avenue
Kansas City, Missouri 64106

83. Inquiry Objectives in the Teaching of Biology (JH-SH) - Mid-Continent Regional Educational Laboratory, Kansas City, Missouri (\$1.50)

Description: A categorization of behavioral objectives, emphasizing inquiry processes as exemplified by content. There are representative examples of behaviors involving both inquiry processes and biological content. For each major topic there are inquiry factors and acceptable student performance.

Topics Included: Recognition & Differentiation
Taxonomic Principle
Antecedent - Consequent Principle
Structure - Function Principle
Regulation & Homeostasis Principle
Self-Regulatory System Principle

Skills in Carrying out Principles of Inquiry
Activities Characteristic of the Taxonomic Mode
Activities Characteristic of the Antecedent - Consequent Mode
Activities Characteristic of the Structure - Function Mode
Activities Characteristic of the Regulation - Homeostasis Mode
Activities Characteristic of the Self-Regulatory Mode
A Biological Problem Stated in Terms of the Five Guiding Principles

Major Factors in Inquiry

| | |
|-----------------------------------|---------------------------|
| Formulating a Problem | Formulating Hypotheses |
| Designing a Study | Executing the Plan of |
| Interpreting the Data or Findings | Investigation |
| | Synthesizing Knowledge |
| | Gained from Investigation |

Additional Specificity for Inquiry Factors

| | |
|-----------------------------------|---------------------------|
| Formulating a Problem | Formulating Hypotheses |
| Designing a Study | Executing the Plan of |
| Interpreting the Data or Findings | Investigation |
| | Synthesizing Knowledge |
| | Gained from Investigation |

Samples of Instructional Strategies to Bring About Desired Behaviors

| | |
|-----------------------------------|---------------------------|
| Formulating a Problem | Formulating Hypotheses |
| Designing a Study | Executing the Plan of |
| Interpreting the Data or Findings | Investigation |
| | Synthesizing Knowledge |
| | Gained from Investigation |

SOURCE REFERENCE

84. Mr. Timothy J. Westbrook
Vice-President
Ward's Natural Science Establishment, Inc.
P. O. Box 1712
Rochester, New York 14603

Affective or Attitudinal Qualities of Inquiry Behaviors

| | |
|---------------------|---------------------------|
| Curiosity | Confidence |
| Openness | Perserverance |
| Reality Orientation | Satisfaction |
| Risk-taking | Respect for Theoretical |
| Precision | Structures |
| Responsibility | Concensus & Collaboration |

Inquiry into Inquiry

| |
|--|
| Analyzing Research for its Basic Parts |
| Analyzing Relationships Among Basic Parts |
| Evaluating a Research Report |
| Comparing Scientific Papers |
| Applying Skills Gained from Analyzing Scientific Papers to Other Reports |

84. Solo-Learn System (SH) - Ward's Natural Science Establishment, Inc.,
Monterey, California (\$27.00/unit)

Description: A self-contained, individualized, multi-media system utilizing visual and audio aids, employing active participation by students. Each topical unit contains instructions, learning objectives, an audio cassette, a filmstrip, a package of 25 four-day student review sheets, and answer keys.

| | | |
|------------------|--|--|
| Topics Included: | Biological Measurements | Photosynthesis |
| | Diffusion & Osmosis | Photosynthesis Details I |
| | The Animal Cell | Photosynthesis Details II |
| | Carbohydrates | Fats |
| | Carbohydrate Structure & the Glycosidic Link | Amino Acids |
| | Amino Acid Structure & the Peptide Link | Mutations & Chromosomal Modifications |
| | Proteins & Deamination | Ecology |
| | Biological Oxidation & ATP | Homeostasis |
| | Oxidations: Fundamental Types | The Energy Cycle & Trophic Levels |
| | The KREBS Cycle | The Water Cycle |
| | Mitosis | The Carbon Cycle |
| | Meiosis | The Nitrogen Cycle |
| | Gametogenesis | Malaria |
| | Probability | Schistosomiasis |
| | Sex Determination & Sex-Linkage | Mendelian Inheritance |
| | DNA | Linkage, Crossing-Over & Chromosome Maps |
| | | The Nucleotides |

SOURCE REFERENCE

85. Mr. Ron Caselli
Coordinator of Ethnic Studies
Sonoma County Office of Education
2555 Mindocino Avenue
Santa Rosa, California 95401

86. McGraw-Hill Book Company
330 West 42nd Street
New York, New York 10036

SOCIAL STUDIES

85. An Instructional Plan for Teaching Black History (P-A) - Sonoma County of Education, Santa Rosa, California

Description: Instructional objectives for Black History designed primarily for secondary social studies. Also includes a basic reading list and a basic film list.

Topics Included: Inferential Purposes of the Black History Program
Basic Historical Content of the Black History Program
Development of Skills Within the Black History Program

86. History of Man Film Guide (SH-A) - McGraw-Hill Films, New York, New York

Description: Descriptions of content of films intended primarily for use in world history, world cultures, and European history courses. For each film, student objectives are listed as well as suggestions for discussion.

Topics Included: How Man Adapts to his Physical Environment
How Man Discovers His Past
Despite Man's Differences.....
Man as Hunter and Food Gatherer
The Agricultural Revolution: Man as Food Producer
Man and the Rise of Civilization
European Expansion: Its Influence on Man
Man and the Industrial Revolution
Man and the "Second" Industrial Revolution

SOURCE REFERENCE

87. Dr. William E. Drake
Professor and Chairman,
Agricultural and Occupational Education
Department of Education
Stone Hall
Ithaca, New York 14850
88. Mr. Z. J. Hamlett
Automotive Staff
Daytona Beach Community College
P. O. Box 1111
Daytona Beach, Florida 32015
89. Mr. Z. J. Hamlett
Automotive Staff
Daytona Beach Community College
P. O. Box 1111
Daytona Beach, Florida 32015

VOCATIONAL-TECHNICAL EDUCATION

87. Performance Goals for Occupational Education in Agriculture (JH-A) - State Education Department, Albany, New York

Description: Several hundred instructional modules, each containing specific objectives, content, teaching method, student application activities, evaluative procedures and resource materials.

| | | |
|------------------|------------------------------------|---|
| Topics Included: | Agricultural Production | Agricultural Resources |
| | Agricultural Supplies/ Services | Forests |
| | Agricultural Mechanics | Agriculture, Other Ornamental Horticulture |

Each topic encompasses a number of modules on specific topics.

88. Automotive Engines and Related Systems: Behavioral Objectives (JH-A) - Daytona Beach Community College, Daytona Beach, Florida

Description: A course outline which contains goals, general objectives, specific objectives, and evaluation procedures for both affective and performance objectives.

| | | |
|------------------|--------------------|-------------------|
| Topics Included: | The Engine | Electrical System |
| | Lubrication System | Cranking Motors |
| | Cooling System | Charging System |
| | Fuel System | Ignition System |

89. Power Train and Chassis: Behavioral Objectives (JH-A) - Daytona Beach Community College, Daytona Beach, Florida

Description: A course outline which contains goals, general objectives, specific objectives, and evaluation procedures for both affective and performance objectives.

| | | |
|------------------|---|--|
| Topics Included: | Clutch Assembly | Brake System |
| | Three-Speed Transmission | Front Suspension & Steering |
| | Propeller, Shaft, Universal Joints & Rear Suspension | Wheel Alignment & Adjustment Procedures |
| | Rear Axle Assembly | |

SOURCE REFERENCE

90. Dr. Robert E. Collard
Consultant, Industrial Education
Division of Vocational, Technical
and Adult Education
State Department of Education
Tallahassee, Florida 32304
91. Dr. Robert E. Collard
Consultant, Industrial Education
Division of Vocational, Technical
and Adult Education
State Department of Education
Tallahassee, Florida 32304
92. Dr. Carl W. Proehl, Director
State Department of Education
Division of Vocational, Technical
and Adult Education
State Department of Education
Tallahassee, Florida 32304

90. Report on Instructional Analysis Study of the Automotive Mechanic Occupation (SH-A) - State Department of Education, Tallahassee, Florida

Description: A course outline for the preparation of auto mechanics at the job entry level. Indicates knowledges and competencies to be achieved within each topic.

Topics Included: Engine
Electrical System
Fuel Systems
Power Train
Cooling System Steering System
Braking System
Suspension System
Heating & Air
Conditioning

91. Instructional Analysis of the Cosmetology Occupation (SH-A) - State Department of Education, Tallahassee, Florida

Description: A course outline for the preparation of cosmetologists at the job entry level. Indicates competencies to be achieved within each topic.

Topics Included: Permanent Waving
Hair Cutting & Shaping
Scalp Treatment
Hair Coloring, Tinting &
Bleaching
Shampooing
Finger Wave & Hair Style Facials, Massage, Make-up
& Light Therapy
Manicuring & Pedicuring
Hair Straightening
Wigs & Hair Pieces
Charm & Poise
Shop Management

92. Employability Skills Guide for Work Experience Programs (JH-A) - Division of Vocational, Technical & Adult Education - Florida Department of Education, Tallahassee, Florida

Description: A guide which classifies objectives in terms of major goals. Includes learning experiences, resources, and methods of evaluation, for each objective.

Topics Included: Attitudes about Work, School & Society
Personal Appearance & Hygiene
Connection Between World of Work & Study
Personality Characteristics
Personal Economics & the Economic System
Recognition Through Successful Experiences
Achievement in the School's Educational Program

SOURCE REFERENCE

93. Ms. Ruth Vaes, Editorial Manager
Published Products, Building 235-2N
3M Company
3M Center
St. Paul, Minnesota 55101
94. Mr. Joseph L. Boyd, Jr.
Educational Testing Service
Princeton, New Jersey 08540
95. Mrs. Marcia B. Garman
Research Analyst
San Mateo County Office of Education
Education Resources Center
590 Hamilton Street
Redwood City, California 94063

93. Units on Management (JH-A) - 3M Company, St. Paul, Minnesota

*Description: A series of units on management, e.g., "Evaluating Advertising", each of which contains objectives, suggestions for the teacher, and a bibliography. Each topic in a unit is keyed to media produced by 3M.

94. Handbook of Performance Testing (SH-A) - Educational Testing Service, Princeton, New Jersey

Description: An extensive document offering a rationale for the use of performance tests, ways to plan for their use, and guidelines for the preparation and grading of such tests. It also contains an appendix of performance tests in the thirteen areas listed below.

Topics Included: Bench Woodwork
Operation of IBM 083 Sorter
Fabrication of a Rigid Tube Assembly
Fabrics Repair
Joining Ferrous & Nonferrous Metals
Metal Body Repair
Dental Hygiene
Offset Press Operation
Machinist
Automatic Clothes Washer Simulator
Transistor Receiver
Cosmetology
Plymouth Troubleshooting Contest

95. Vocational-Technical Education Programs (SH) - San Mateo County Office of Education, Redwood City, California

Description: Terminal performance objectives for several programs in the area of vocational-technical education. For each objective in each program there are explicit statements of the terminal performance, the expected student performance, the conditions under which the student will perform, and the extent to which the student will perform. All materials are available in microfiche format only.

SOURCE REFERENCE

96. Mr. Donald Gilman
Alaska Skill Center
P. O. Box 615
Seward, Alaska 99664

Topics Included: Terminal Performance Objectives for a Phased Typing Program in Business Education (\$.75)
 Calculating Machines I, Terminal Performance Objectives (\$.25)
 Occupational Competence Unit Series "Teachers' Resource Guides for Occupational Competence" (\$1.25)
 Calculating Machines 2 (\$.25)
 Terminal Performance Objectives for Selected Programs in: Business Education, Distributive Education, Work Experience Education, Career Guidance (\$.50)
 Terminal Performance Objectives for a Phased Shorthand Program in Business Education (\$.75)

96. Vocational-Technical Training Programs (SH-A) - Alaska Skill Center, Seward, Alaska

| | | |
|------------------|---|---|
| Description: | A compilation of objectives for trainees enrolled in various job-entry level training programs. A Trainee Progress Chart is provided for each skill area which lists tasks and subtasks (objectives) necessary for successful completion of the program. Evaluation is based upon instructor ratings of the student's capability. | |
| Topics Included: | <u>Clerical Cluster</u> Office Safety Delivery Services Typing Principles Business English & Communication Business Mathematics Record Keeping Accounting Shorthand Office Procedures & Machines | <u>Mechanical Cluster</u> Mechanic Fundamentals Gasoline Engine Repairman Marine Diesel Mechanic Helper Automotive Mechanic Helper Heavy Equipment Mechanic Helper |
| | <u>Cooking Cluster</u> Cook's Helper Bull Cook Short Order Cook Mess Cook Cook (Hotel & Restaurant) Baker's Helper Pie Maker | <u>Power Plant Generation Fundamentals</u> <u>Maintenance Cluster</u> Porter I Porter II Janitor Maintenance Man Helper Building Maintenance Man I Building Maintenance Man II |

SOURCE REFERENCE

97. Mr. Donald F. Averill, Coordinator
Work Experience Education
Whittier Union High School District
12102 East Washington Boulevard
Whittier, California 90606

97. Work Experience Program: A Preliminary Workbook (SH-A) - California State
Department of Education, Whittier, California

Description: A document which contains goals, selected program objectives, specific objectives, terminal objectives and evaluative criteria for students enrolled in California State programs of work experience education.

Topics Included: Exploratory Work Experience
General Work Experience
Vocational Work Experience

For each topic, objectives related to:

Relevancy
Self-development
Self-evaluation
Acculturation
Human Relations

SOURCE REFERENCE

98. Lockheed Educational Systems
P. O. Box 504
Sunnyvale, California 94088
99. Dr. B. Elgit Blanton
Office of Reading and Language Studies
207 Pine Hall
School of Education
Indiana University
Bloomington, Indiana 47401
100. Dr. Raymond Bernabei
Bucks County Public Schools
Curriculum Resources Center
80 East Court Street
Doylestown, Pennsylvania 18901
101. Ms. Holly Smith
Assistant to the Director
National Clearinghouse on the
Teaching of English
1171 Kenyon Road
Urbana, Illinois 61801

SOURCES OF SOURCES

98. The American Government Information Unit: Curriculum Alternatives for Secondary Schools - Lockheed Educational Systems, Sunnyvale, California

Description: Reports on nine new programs in American government which offer new approaches. Each report describes program goals and objectives, content and materials, classroom strategy, student and teacher prerequisites, implementation requirements and costs, program development and evaluation, and project history.

99. Behavioral Objectives - Office of Reading and Language Studies, Indiana University

Description: An annotated bibliography containing sources of behavioral objectives, articles about projects using objectives, and books on the use of objectives in instruction.

100. Behavioral Objectives: An Annotated Resource File - Raymond Bernabei, Bucks County Public Schools, Doylestown, Pennsylvania (\$2.00)

Description: An annotated resource file which contains research studies, conference papers, and other documents on behavioral objectives.

101. Bibliographies on Behavioral Objectives - National Clearinghouse on the Teaching of English, Urbana, Illinois

Description: Two documents containing lists of books, articles, and reports on the writing of objectives, the potential uses of objectives, and projects which have developed or are utilizing objectives in the area of English and language arts.

Documents:

An NCTE/ERIC Bibliography on Behavioral Objectives
A Current Bibliography on Accountability, Performance Contracts, Behavioral Objectives and Assessment of Student Performance in Language Arts

SOURCE REFERENCE

102. Ms. Grace Patterson
Office of the Superintendent
Buffalo Public Schools
Buffalo, New York 14202
103. Dr. Bruce Joyce
Teachers College
Columbia University
New York, New York
104. Mr. John F. Reynolds
Director, Performance Objectives Program
Amherst-Pelham Schools
Amherst, Massachusetts 01002

102. Blueprint for Progress - Buffalo Public Schools, Buffalo, New York

Description: Reports on federal and state funded educational programs in the city of Buffalo. For each program listed there is included a general description of the project, project objectives, project activities, pupils served by the project, facilities to be used, the personnel participating, the evaluation design, and the total proposed budget.

103. Materials for Modules: A Classification of Competency-Oriented Tools for Teacher Education - Teachers College, Columbia University, New York, New York

Description: A book containing a collection, classification and analysis of sources of competency-oriented teacher programs and materials.

Topics Included: Basic Interactive Teaching Skills
Instructional Planning & Design Skills
Teaching Strategies
Analysis of Classroom Activity
Instructional Decision-Making
Student Diagnosis & Evaluation
Foundations of Education
Content Areas
Media & Instructional Technology
Educational Staffing & Instructional Organization
Staff Development

104. Sources of Information on Performance Objectives, POP Mini-paper #4 - Amherst-Pelham Schools, Amherst, Massachusetts

Description: An annotated bibliography containing sources of behavioral objectives, articles about projects using objectives, and books on the use of objectives in instruction.

SOURCE REFERENCE

105. Ms. Fay F. Davis
Product Information
Southwest Cooperative Educational Laboratory
117 Richmond Drive, N. E.
Albuquerque, New Mexico 87106
106. Mr. James B. Andrews
Music Supervisor
Department of Education
Charleston, West Virginia 25305
107. Dr. E. Wayne Roberson
EPIC Diversified Systems, Corp.
P. O. Box 13052
Tucson, Arizona 85711

UTILIZATION OF OBJECTIVES

105. Behavioral Objectives Package - Southwestern Cooperative Educational Laboratory, Albuquerque, New Mexico

*Description: An instructional package containing slide-tape presentations, and a workbook which consists of six lessons and the related pre and post tests. Also included in the workbook are an outline of goals and objectives, the instructional program, the three domains (cognitive, affective, and psychomotor), entering behaviors, components of a behavioral objective, and how to write a behavioral objective.

106. The CEP "Primer" for Writing Objectives (A) - West Virginia Department of Education, Charleston, West Virginia

Description: Pamphlet produced for use in workshops designed to teach instructional personnel the rationale for the production and utilization of objectives.

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| Topics Included: | Glossary | Levels of Objectives |
| | Rudiments of Objective | Policy Objective |
| | Writing | Program Objective |
| | Curriculum Objective | Instructional Objective |
| | Ideas for Implementation | |

107. Evaluative Skills Materials for Accountability - Educational Innovators Press, Tucson, Arizona

Description: A series of publications designed to assist educators in developing skills for evaluating educational programs by utilizing goals and objectives in specifying learning outcomes.

Topics Included: A Scheme for Evaluation & Organizational Structure Variables
 Developing & Writing Behavioral Objectives
 Evaluation Design
 Coding & Writing Test Items
 Case Studies
 Proposal Guidelines
 Performance & Process Objectives
 Needs Assessment

SOURCE REFERENCE

108. Mr. John F. Reynolds
Director, Performance Objectives Program
Amherst-Pelham Schools
Amherst, Massachusetts 01002
109. Ms. Fay F. Davis
Product Information
Southwestern Cooperative Educational Laboratory
117 Richmond Drive, N. E.
Albuquerque, New Mexico 87106
110. Dr. J. Marvin Cook
Associate Professor of Education
University of Maryland
Baltimore, Maryland 21228

Basic Teaching Skills Development Packet
 A Format for Monitoring the Teaching-Learning Process
 Developing Observation Systems
 Hierarchy for Goals & Objectives
 Educational Program Audit, Credibility of Education
 A Sourcebook for Implementing Accountability
 Viewpoints on Accountability

108. Performance Objective Program (POP) - Amherst - Pelham Schools, Amherst, Massachusetts

Description: POP is a system of managing instructional programs for effective individualization of learning. The project has produced an ILP entitled "How to Prepare Behavioral Objectives" which includes objectives, pre-assessment, instruction, and evaluation. The project has also produced a number of papers concerning the production and evaluation of performance objectives.

109. Systems Approach to Lesson Planning - Southwestern Cooperative Educational Laboratory, Albuquerque, New Mexico

***Description:** A package containing a workbook with six behaviorally defined lessons keyed to be used with an accompanying slide/tape presentation. Included is a pre-test to determine teacher entry level. Other specific activities in the package include: utilization of terminology, and definition of parts, of a teaching systems matrix, identification of probable sources of teaching problems, and practice in the use of the matrix as a teaching tool.

110. Teaching with Behavioral Objectives (Books 1-5) - University of Maryland, Baltimore, Maryland

Description: Manuals for in-service workshops, seminars, college and university courses, and conferences. The books are entitled:

- Constructing Behavioral Objectives
- Constructing Learning Hierarchies
- Examples of Learning Hierarchies in Language Arts/Reading, Social Studies, Science, Mathematics & Literature
- Evaluation with Behavioral Objectives
- Classroom Management with Behavioral Objectives

SOURCE REFERENCE

111. Dr. George E. Parsons
704 Teachers College
School of Education
University of Cincinnati
Cincinnati, Ohio
112. Dr. Robert A. Roth, Coordinator
Performance Evaluation Project
Rutgers University
222 Van Dyck Hall
New Brunswick, New Jersey 08903
113. Dr. Stanley Delidow
College of Human Resources and Education
West Virginia University
Morgantown, West Virginia 26506

TEACHER EDUCATION

Counseling

111. Course Descriptions (Counseling) - University of Cincinnati, Cincinnati, Ohio

Description: Two courses in the area of counseling are described. Each includes an introduction, course outline, evaluation procedures, and student objectives.

Course titles are:

Group Counseling

Counseling & Urban Problems

Curriculum Areas

112. Performance Evaluation Project: Task Force Reports - New Jersey State Department of Education, Trenton, New Jersey

Description: A collection of cognitive and affective performance goal statements for teachers.

| | | |
|------------------|-----------------------------------|--------------------------|
| Topics Included: | Art | Health Education |
| | Math | Home Economics |
| | Vocational Teaching | Industrial Arts |
| | Business & Distributive Education | Music |
| | Elementary | Nursery School Education |
| | Foreign Language | Science |
| | Exceptional Children | Physical Education |
| | | Social Studies |

Educational Psychology

113. Educational Psychology 105 - Individualized Teacher Training Modules - West Virginia University, Morgantown, Virginia

Description: Nine individualized units on topics in Educational Psychology. Each module contains instructions to participants, pretests, objectives, a study guide, and posttests.

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| Topics Included: | Teaching As Changing Behavior | Designing Instructional Sequences |
| | How We Learn | Motivation & Discipline |
| | Generalization, Discrimination, & Concept Formation | Punishment |
| | Behavioral Objectives | Individualizing Mass Education |
| | | Measurement |

SOURCE REFERENCE

114. Dr. John E. Rhett
Psychological Foundations of Education
330 Burton Hall
University of Minnesota
Minneapolis, Minnesota
115. Dr. N. M. McMillan, Director
College of Education
Shaw University
Raleigh, North Carolina
116. Mrs. Carolyn Anderson
Center for the Teaching Professions
2000 Sheridan Road
Northwestern University
Evanston, Illinois 60201

114. Substantive Domains for Educational Psychological Performance by Undergraduate Teachers-in-Training - University of Minnesota, Minneapolis, Minnesota

Description: A compilation of objectives, for an undergraduate teacher training program. Nine training modules have been developed based on the objectives.

Topics Included: Communications Skills & Group Process
Value Clarification
Self-Management & Goal Setting
Risk-Taking & Scientific Method
Evaluation, Measurement, & Testing
Precision Teaching
Inquiry & Other Teaching Strategies
Organizational Development & Institutional Change
Human Relations, Especially Racism

Elementary Education

115. A Model for a Performance-Based Elementary Teacher Education Program at Shaw University - Shaw University, Raleigh, North Carolina

Description: A final report on a project to improve teacher education at Shaw University. A committee reviewed the programs of nine other universities and from the data designed a model for the program at Shaw. Included in the model are a rationale for the use of objectives, a procedure for writing objectives and illustrative objectives in six areas.

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| Topics Included: | Elementary Science Language Arts Health Education | Physical Education Mathematics Social Studies |
|------------------|---|---|

Evaluation & Research

116. Self-Instructional Units on Evaluation & Research - Northwestern University,
Evanston, Illinois

Description: Eleven self-instructional units, on evaluation and research, each containing objectives, an overview, instruction, a mastery test, and test feedback.

SOURCE REFERENCE

117. Mr. Gilbert F. Shearron
427 Aderhold Hall
University of Georgia
Athens, Georgia 30601

Topics Included: Overview
 Experiments & Testing Statistical Hypotheses
 Avoiding Common Errors in Evaluation & Research
 Questionnaire Construction
 Selecting & Using Standardized Tests
 Technical Issues in Testing
 Data Collection by Interview
 Data Presentation Techniques
 A Layman's Introduction to Computer Applications
 Hints for Project Evaluators
 Specifying Behavioral Objectives

Generic Skills

117. Competency-Based Teacher Education Modules - The University of Georgia, Athens, Georgia (\$25.00/complete set)

Description: A series of competency-based teacher education modules for major curriculum areas. Modules contain objectives, activities, and evaluation procedures. Bulletins, summaries and research and development reports are also available.

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| Topics Included: | Reading | <u>Child Development</u> ...With Implications for Working With Disadvantaged Children & Their Families |
| | Word Recognition Skills | |
| | Word Recognition: Phonetics | |
| | Comprehension Skills | |
| | Teaching A Directed Reading Lesson | <u>Physical Education</u> |
| | Classroom Management for Reading Instruction | <u>Science Education</u> Elementary Science Methods Utilization of Science Equipment |
| | <u>Mathematics</u> | |
| | Teacher Concepts of Fractional Numbers | |
| | Teaching Multiplication & Division of Fractional Numbers | <u>Classroom Management</u> Planning to Avoid Individual & Classroom Management Problems |
| | Teaching Additions & Subtraction of Fractional Numbers | Coping With Individual & Classroom Management Problems |
| | Using Drill Activities | |
| | <u>Language Arts</u> | |
| | Listening | |
| | Spelling | |
| | Creative Dramatics | |

SOURCE REFERENCE

118. Dr. L. W. Dean
318 Erickson Hall
Michigan State University
East Lansing, Michigan

119. Mr. Lester Kitching
Panhandle Area Educational Cooperative
P. O. Drawer 190
Chipley, Florida 32428

118. Education 200 Handbook: Individual and the School, Michigan State University, East Lansing, Michigan

Description: Four units designed to foster the development of skills and competencies in diagnosing and responding to student concerns. Each unit includes an introductory description, student teacher objectives, presentation of concepts, practice exercises, and carrel booklets to be used in conjunction with tapes and slides.

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| Topics Included: | Assessment Strategies | Objectives Evaluation |
|------------------|-----------------------|-----------------------|

119. Florida Teacher Education Modules - Panhandle Area Educational Cooperative, Chipley, Florida

Description: Clusters of individualized instructional modules for preservice and inservice teacher education. Each module contains general objectives, specific objectives, instructions to participants, instructions for administering the module, pre-assessment, an overview, materials and equipment, activities for each objective, and evaluation.

Topics Included:

- Teacher Aide Training
 - Defining the Role of the Teacher Aide
 - Recognizing How Children Develop
 - Promoting Appropriate Language Patterns
 - Utilizing Phonics & Word Attack Skills
 - Demonstrating Legible Handwriting
 - Developing Map & Globe Skills
 - Using the Library
 - Constructing a Resource File
 - Preparing the Physical Environment for Learning
 - Completing State & County Forms

- Planning Skills for Teachers
 - Using Behavioral Objectives
 - Designing a Learning Activity
 - Selecting an Instructional Mode
 - Planning Creative Activities for Independent Learning
 - Selecting Commercial Materials
 - Compiling & Using Instructional Games
 - Developing an Instructional Package
 - Organizing Learning Stations for the Language Arts

Presentation Skills for Teachers

Using Examples & Illustrations

Using Lecture Techniques to Present Information

Using Planned Repetition

Establishing Appropriate Frames of Reference

Increasing Participation

Feedback

Nonverbal Behavior

Stimulus Variations

Classroom Procedures

Mini-Pak for Making Assignments

Monitoring In-Class Assignments

Achieving Classroom Transitions

Achieving Closure

Reinforcement

Classroom Management

Recognizing & Obtaining Attending Behavior

Set Induction

Questioning Skills

Question Upgrading Improvement Package

Using High Order Questions

Inducing Student-Initiated Questions

Inquiry Techniques: Using Probing Questions

Pre-Cueing

Assessment

Evaluating Learning & Instruction

Diagnosing Arithmetic Skills

Using Informal Diagnostic Tests of Reading Skills

Special Skills

Developing an Art Activities File

Teaching Songs & Rhythms

Fostering Creativity

Utilizing the Comprehensive Readiness Program

Methods of Introducing & Summarizing a Unit

Developing Listening Skills

Utilizing Field Trips for Learning

Assessing Educational Personnel

Introduction to Diagnosis Prescription System for Staff Development

Diagnosis Prescription System for Staff Development

Building a Diagnosis Prescription System for Staff Development

SOURCE REFERENCE

120. Dr. Robert L. Arends
Program Development Specialist
The Center for the Study of Teaching
117 Bacon Hall
1300 Elmwood Avenue
Buffalo, New York 14222

120. Objectives for Teacher Education - State University College at Buffalo,
Buffalo, New York

Description: A collection of objectives and post-assessment criteria abstracted from teacher education module clusters developed and implemented at State University College at Buffalo. Also available is a cluster of modules on "The Concept of a Competency-Based Teacher Education Program".

Topics Included: Content & Concepts of Elementary School Mathematics
Strategies/Approaches in Teaching Elementary Mathematics
Management Essentials in Mathematics
Terminology & Laws of Mathematics
Diagnosing in Mathematics
Approach to Teaching Mathematics
Social Studies Content
Evaluation Techniques (Mathematics & Social Studies)
Behavioral Objectives in Math/Science
New Curriculum Projects in Math/Science
Methods of Delivery (Science)
Science/Math Workshops
Diagnosis & Evaluation
Supervision
Systematic Observation & Analysis of Teaching Behavior
Personal Communications
Learning Models
Concept Formation & Maintenance
Prejudice
Education & Race
Poverty & Education
Heredity & Environment
Teacher Expectations
Sociology of the Inner City
Sociology of the Urban Community
The School System as an Institution
Race, Ethnicity, Poverty & Urban School
Statistics
Reference Format & Style
Research Instruments
Types of Studies
Oral Language
Teaching Language Arts Phases I & II
Understanding the Reading Process as Precursor to Analysis of Reading Ability
Identification of the Symptoms & Causality of Reading Difficulty & Failure
Diagnosing Reading Ability
Language & Culture Phonology
Aspectual Linguistic Analysis
Differentiated Staffing

SOURCE REFERENCE

121. Dr. William Engel
Teacher Education Committee
College of Education
University of South Florida
Tampa, Florida 33620

122. Dr. Dwight W. Allen
Dean, College of Education
University of Massachusetts
Amherst, Massachusetts

or

Dr. Frank Sobol
College of Education
Florida International University
Tamiami Trail
Miami, Florida

121. Performance-Based Teacher Education Modules - University of South Florida,
Tampa, Florida

| | | |
|------------------|--|---|
| Description: | A series of Individualized Teacher Education Modules. The modules contain an introduction, general directions, prerequisites, preassessment, primary objectives, secondary objectives, activities, evaluation procedures, resources, and references. | |
| Topics Included: | Approaches to Teaching Planning for Teaching Teaching Curriculum Projects Primary Processes The Nature of Science Educational Psychology The Teaching of Pre- Secondary School Geometry Designing an Experiment | Piaget in Science Periodicals for Teachers of Science in the Elementary School Ecology Science for the Child Responsibilities of Class- room Teachers in Relation to Total School Health Program |

122. A Task Analysis of Educational Positions - University of Massachusetts,
Amherst, Massachusetts

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|------------------|--|--|--|
| Description: | A listing of over 9,000 objectives developed for implementation of differentiated staffing. Objectives are coded to indicate the type of personnel and the situation for which they are intended. | | |
| Topics Included: | Master Teacher Senior Teacher Staff Teacher Associate Teacher Lecturer Intern Extern Student Teacher Resource Teacher Parent Vice Principal Instructor Advisor | Personnel Research Teacher Team Leader Team Teacher Teaching Assistant Instructional Aide Department Head Administrator Curriculum Developer Counselor Student Superintendent School Board | Media Specialist Graphic Specialist Source Aide Librarian Technician Secretary Clerical Aide Community Resource Volunteer Principal Supervisor Consultant |

SOURCE REFERENCE

123. Dr. Elizabeth Taylor
Assistant Professor of Education
School of Education
Teacher Corps
University of Louisville
Louisville, Kentucky 40208

124. Dr. Carey Southall
215 Hill Hall
University of Missouri
Columbia, Missouri 65201

| <u>Situations</u> | |
|--------------------------|------------------------------------|
| Learning Management | Teaching Teachers |
| Large Group Instruction | Department & Committee |
| Small Group Instruction | Meetings |
| Lecture | School Governance |
| Tutoring | Research |
| Independent Study | Curricular Change or Innovation |
| Planning & Preparation | Continued Education |
| Student Diagnosis | Community Relations |
| Student Remediation | Professional Service |
| Counseling | Material Resources |
| Extra-Curricular & Clubs | Review |
| Parent Conferences | Student Presentation |
| Presentation | |

Interning

123. Intern Evaluation - University of Louisville, Louisville, Kentucky

Description: Objectives, criteria and methods for evalution of intern performance prior to, and during, student teaching.

124. Student Teaching: General Guidelines; Tri-Level Student Teacher Competencies - University of Missouri, Columbia, Missouri

Description: Objectives for cooperating teachers and for student teachers. Student teacher objectives are classified by levels, level three denoting that time when the student teacher takes complete charge of a teaching situation.

Topics Included: Cooperating Teachers
Student Teacher Assignment
Relationship to the College Supervisor
Orientation
Introduction of the Student
Observation, Participation & Teaching
Delegation of Instructional Responsibilities
Noninstructional Arrangements
Evalution

Student Teachers
Level I - Orientation & Observation
Level II - Assumption of Routine Duties
Level III - Assumption of Complete Responsibility
for Teaching Class

SOURCE REFERENCE

125. Dr. Morris A. Shirts, Dean
School of Education
Southern Utah State College
Cedar City, Utah 84720
126. Mr. William H. Kendrick
Vice President Educational Services
Croft Educational Services, Inc.
100 Garfield Avenue
New London, Connecticut 06320
127. Dr. Carson W. Bryan
Wheeling College
Wheeling, West, Virginia 26003

Media

125. Behavioral Objectives for Education 316 (Media Preparation) - Southern Utah State College, Cedar City, Utah

Description: A listing of objectives for the preparation of various types of media for use in the elementary or secondary school classroom.

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|------------------|-------------------------|-----------------------|
| Topics Included: | Overhead Transparencies | Matting |
| | Lamination | Duplication |
| | Drawing | Commercial Production |

Reading

126. Inservice Programs for Teachers (Reading) - Croft Educational Services, Inc., New London, Connecticut (\$250.00-300.00/15 teachers)

Description: Inservice Reading Program: A Systems Approach to Word-Attack Skills - A program designed to train teachers in building student skills using a phonics or linquistic based system.

Reading Comprehension Skills: A Systems Approach - Materials designed to help a school staff organize inservice workshops to improve the methods of teaching comprehension skills. Closely parallels the Inservice Reading Program.

Specific objectives in reading form the basis for workshop sessions in both programs.

Secondary Education

127. Secondary Teacher Preparation at Wheeling College: A Model Based Upon Person, Performance and Partnership - Wheeling College, Wheeling, West Virginia

Description: A description of the philosophy of the program, student-teacher goals, student-teacher activities and evaluation techniques.

SOURCE REFERENCE

128. Dr. James L. Hoerner, Supervisor
Vocational Teacher Education Service
Division of Vocational, Technical
and Adult Education
Dade County Public Schools
1410 Northeast Second Avenue
Miami, Florida 33132

Vocational Education

128. Vocational Teacher Education - Dade County Public Schools, Miami, Florida

Description: A listing of 25 cognitive and affective objectives for a performance-based vocational teacher education program.